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ABSTRACT

The report of the Health Examination Survey program contained national estimates of infant health needs and the extent of prenatal and postnatal medical care received by 7,119 normal and handicapped children who were 6 to 11 years of age in 1963 through 1965. Children were chosen to be representative of American noninstitutionalized children with respect to age, sex, race, and region as well as other demographic and socioeconomic variables. Medical history data were obtained from a questionnaire completed by the parent. Principal findings included the following: more than 97% of mothers had some medical care during pregnancy; 3% of the children weighed less than 5 pounds at birth while 1% weighed more than 10 pounds; mothers of physically underdeveloped infants reported more medical problems during pregnancy; 8% (equally distributed between boys and girls) of the children had birth defects; 92% of the children were born in a hospital; 14% of the children had health problems during infancy of which 98% had the services of a physician; one third of the children were breast fed; and children in good health at the time of the survey were only slightly more likely to have been free of health problems during infancy. (DB)

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Prenatal-Postnatal Health Needs and Medical Care of Children United States

U. S. DEPARTMENT OF
HEALTH, EDUCATION, AND WELFARE
Public Health Service
Health Services and Mental Health Administration

Series 11 reports present findings from the National Health Examination Survey, which obtains data through direct examination, tests, and measurements of samples of the U.S. population. Reports 1 through 38 relate to the adult program, Cycle I of the Health Examination Survey. The present report is one of a number of reports of findings from the children and youth programs, Cycles II and III of the Health Examination Survey. These reports are being published in Series 11 but are numbered consecutively beginning with 101. It is hoped this will guide users to the data in which they are interested.

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Prenatal-Postnatal Health Needs and Medical Care of Children

United States

Extent and timing of prenatal medical care, condition at birth, health in infancy, extent of breast feeding, and health status at the time of the survey for children 6-11 years of age. Differentials are shown by family income, education of parent, race, and by region and rural areas.

DHEW Publication No. (HSM) 73-1607

U.S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE
Public Health Service

Health Services and Mental Health Administration
National Center for Health Statistics
Rockville, Md. April 1973

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COOPERATION OF THE BUREAU OF THE CENSUS

In accordance with specifications established by the National Health Survey, the Bureau of the Census, under a contractual agreement, participated in the design and selection of the sample, and carried out the first stage of the field interviewing and certain parts of the statistical processing.

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PRENATAL-POSTNATAL HEALTH NEEDS AND CARE OF CHILDREN

Jean Roberts and David Slaby, *Division of Health Examination Statistics*

INTRODUCTION

Presented in this report are findings related primarily to the infant health needs and extent of prenatal and postnatal care which had been obtained for children 6-11 years of age and their mothers in the United States. These estimates are based on findings from the national probability sample of noninstitutionalized children examined in the Health Examination Survey of 1963-65.

Three different survey programs are used to accomplish the objectives of the National Health Survey, which was authorized in 1956 as a continuing Public Health Service activity to determine the health status of the population.[1] The Health Interview Survey, which obtains information by household interview among samples of the U.S. population, is concerned primarily with the impact of illness and disability upon the lives and actions of people. Health Resources Surveys obtain health data as well as health resource and utilization information through surveys of hospitals, nursing homes and other resident institutions, and personnel working in the health and medical occupations. The third major program of the National Health Survey is the Health Examination Survey.

Data from the Health Examination Survey are obtained by direct physical examinations, tests, and measurements performed upon the sample population selected for study. This is the most accurate way of obtaining definite diagnostic data on the prevalence of certain medically defined illnesses. It is the only way to secure information on previously undiagnosed and nonmanifest conditions as well as a varietyof physical, physiological, and psychological measurements within the population. In addition demographic and socioeconomic data to which the examination findings may be related are collected.

The Health Examination Survey is carried out as a series of separate programs, or "cycles," each of which is concerned with some specific age group and with certain specified aspects of health of the population. In the first cycle, data concerning the prevalence of certain chronic diseases were collected in 1960-62 from a sample of the defined adult population (ages 18-79) of the United States.[2,3] Physical and physiological measurements, in addition to the diagnosis of disease conditions, were made upon this sample of the population in order to obtain baseline data for the population as a whole. These measurements included auditory and visual acuity, blood pressure, serum cholesterol and blood glucose levels, height and weight, skinfolds, body girths, and electrocardiographic tracings. Data of this type had not previously been available on a probability sample representative of the defined population.

The second program of the Health Examination Survey, Cycle II, on which this report is based, focused primarily on health factors related to growth and development but also included an examination for heart disease, congenital abnormalities, ear-nose-throat conditions, and neuromusculoskeletal abnormalities. It included examinations by a pediatrician and a dentist; tests

administered by a psychologist; and a variety of tests, procedures, and measurements by technicians. For this survey program a probability sample of the Nation's noninstitutionalized children 6-11 years of age was selected and examined. A comprehensive description of the survey plan, sample design, population estimation procedures, content of the examination, and operation of the survey has been published in previous reports.[4,5]

Data collection for the second cycle was begun in July 1963 and completed by December 1965. Ninety-six percent (7,119) of the 7,417 children selected for the sample were examined. The sample is a probability sample representative of the 24 million noninstitutionalized children 6-11 years of age in the United States at that time.

A standardized single-visit examination was given each child by the examining team in the specially designed mobile units used for the survey. Prior to the examination, information including demographic and socioeconomic data on household members as well as a medical history and behavioral data on the child to be examined was obtained from a parent. Ancillary data on school behavior, adjustment, and health problems were obtained from the school attended (or last attended). Birth certificates for verification of the child's age and information related to his condition at birth were also obtained.

A brief description of the sample design, quality control methods, reliability of the data, and sampling error estimation procedures is contained in appendix I.

SOURCE AND LIMITATIONS OF DATA

Medical history information related to the growth and development of children was obtained in this survey from a self-administered questionnaire left in the home of the sample child by the Census interviewer. The forms were completed by the parent, usually the mother, and picked up about 2 weeks later by the Health Examination Survey (HES) field representative. During her visit to the home the HES field representative reviewed the history and answered questions that the parent may have had concerning that form.

The medical history included questions concerning health status, medical care obtained, and complications at time of birth for these children and their mothers; the extent of prenatal medical care and complications for the mother prior to this birth; health problems of the child in the first year of life; and breast feeding practices. These questions were included as an aid to the pediatrician in his examination of the child. Since they were collected and do give some further insight into the health status of these children, the findings are presented here.

The questions on which this report is based, shown in appendix III, all require recall of specific events and practices at and around the time of the child's birth and during his infancy, which will range from a minimum of 5 years prior to the survey for the youngest to 12 years for the oldest children in the study. Hence the reliability of these data will depend not only on the parent's willingness to respond but also on her ability to recall over that period of time. For key factors, information by age of children is included to show the possible effects of recall over time or any actual change in patterns during this period.

It was possible to validate the questionnaire response on birth weight against the birth weight recorded on the child's birth certificate for nearly 85 percent of the children, within the broad ranges of 5-10 pounds, under 5 pounds, and over 10 pounds. Nearly all (98.1 percent) of the questionnaire responses that could be so validated were found to be correct within these broad ranges specified. Where differences did occur, the birth certificate information was used since the latter did not require recall over a substantial period of time and hence was assumed to be more accurate than the questionnaire response. In addition it was possible to complete this item for the nearly 1 (0.6) percent of these children whose parent could not recall the birth weight. Further information on the age-sex distribution of these errors and omissions are shown in appendix I. Patterns of prenatal and postnatal health care and needs are also considered in this report with respect to differentials by race, family income, parent's education, and by region and rural areas. These demographic and socioeconomic terms are defined in appendix II as used here.

Throughout this report, except as indicated for birth weight, it has been assumed that the distribution of responses for those whose parents could not recall a specific item would be similar to that for children whose parents could recall such information. No further imputation was made for missing data.

FINDINGS

Prenatal Care

Medical care or consultation was obtained during their mother's pregnancy for more than 97 percent of the 24 million children 6-11 years of age in the noninstitutional population of the United States, as estimated from Health Examination Survey findings in 1963-65. These children, born during the period from July 1951 through December 1959, include 98 percent single births and 2 percent twins. For less than 3 percent, or an estimated 618,000 children, their mothers had not seen a doctor professionally during the term of this pregnancy (table 1).

The majority (61 percent) of the mothers who had obtained some medical care during this prenatal period saw a doctor during the first trimester of this pregnancy, more than one-third (36 percent) waited until the second trimester, while less than 4 percent delayed until the third trimester. Medical problems or complications during pregnancy were experienced by the mothers of about one child in eight, or 13 percent (table 4), nearly all of whom consulted a doctor regarding the condition.

Nearly all (95 percent) of the mothers consulting a doctor during this pregnancy did so at least four times. Of those who had four or more doctor visits, nearly two out of three made their initial visit in the first trimester, one out of three in the second, and only 2 percent in the third trimester. The pattern of timing of the initial visit for the 5 percent who made fewer than four visits to the doctor was in marked contrast to this. Only 16 percent saw the doctor in the first trimester, more than one-half waited until the second, and nearly one-third until the third trimester (figure 1).

No consistent change in these patterns of prenatal medical care was evident during this period, the practice being generally similar across the entire age range of the children in the study. Hence any bias that may exist in the answers to these questions due to faulty recall would appear to either be essentially constant for all examined children or have masked any existing trend.

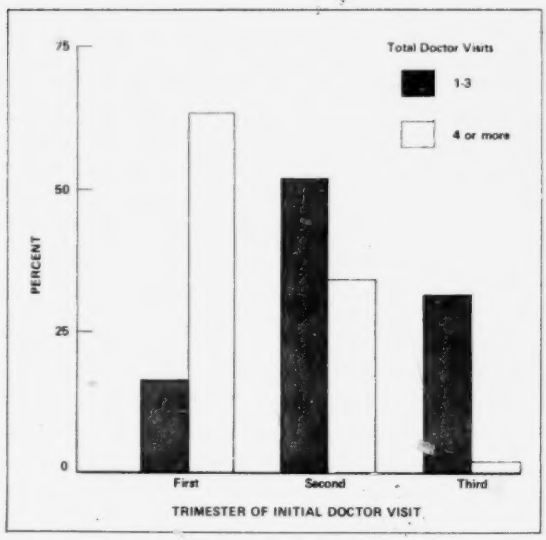

Figure 1. Percent distribution of trimester of initial doctor visit by total number of visits during pregnancy: U.S. children of 6-11 years in 1963-65.

The study findings on the timing of the mother's first visit and the number of her doctor visits during pregnancy differ substantially from findings of the more recent mail followup of live births in 1963 for the National Natality Survey.[6] The present study is based on a probability sample of the nearly 70 percent of children born alive from July 1951-December 1959 who survived to 1963-65 and hence whose medical history would be expected to be more favorable, while the Natality Survey utilized a probability sample of live births in 1963, regardless of the length of life of these children. The volume of visits with a doctor for mothers of children in the present study is substantially greater than that from the 1963 live-birth study—the former averages more than four visits in the 9 months prior to birth, in contrast to less than three in the 12 months prior to birth for those

Table A. Percent distribution of birth weights for liveborn U.S. children: all births in 1963, hospital births in Jan. 1-Mar. 31, 1950, and children of 6-11 years in 1963-65

Birth weight	Live births in 1963	Hospital live births, Jan. 1-Mar. 31, 1950	Children 6-11 years in 1963-65
	Percent distribution		
All liveborn children	100.0	100.0	100.0
Less than 5 pounds	5.5	4.2	2.9
5-10 pounds	93.2	94.4	95.8
More than 10 pounds	1.3	1.4	1.3

liveborn in 1963. In this report it is assumed that number of doctor visits includes visits to a medical facility, as in the Natality Survey. The proportion of mothers who first saw a doctor during the third trimester of pregnancy was substantially lower in the present study (4 percent) than in the natality study (20 percent), while the proportion who did not see a doctor prior to delivery is similar in both.

No age-related trend in the extent of prenatal care was evident during the 1951-59 period, when the children in the present study were born. In the absence of any evidence of change in this regard through 1963, and if the accuracy in reports of a recent and of a quite old event are equally good, an association might appear to exist between earlier prenatal care and the child's chance for survival. However, in fact this apparent association may simply reflect the "halo effect" in recall, where the respondent tends to overstate the extent of behavior which is thought to be expected and desirable.

Condition at Birth

Critical factors related to the normal growth and development of children are their stage of development and health status at birth.

At the time of their birth, 96 percent of these American children were within the middle weight range of 5-10 pounds, while 3 percent weighed less than 5 pounds, and 1 percent exceeded 10 pounds (table 2). The proportion with lower birth weight (less than 5 pounds) in this survey is, as expected, significantly less than the proportion among all liveborn children in this country in 1963 and children born alive in hospitals in the first quarter of 1950, while the proportion with birth weight of 5-10 pounds is significantly greater, as shown in table A.[7,8] The higher birth weights reported in this study would be expected because of the close association between risk of death and weight at birth, as evidenced by the substantially greater neonatal mortality rate among children of low birth weight than those of at least normal weight.[8] In the 1950 hospital study, the neonatal mortality rate among the 5.5 percent liveborn with birth weight 2500 grams (5 pounds, 8 ounces) or less was shown to be nearly 30 times greater than among the 97 percent weighing more than 2500 grams at birth. Hence survivors of their first month of life would include only about 3 percent with birth weight of 2500 grams or less, or about the same proportion as among the children 6-11 years old in the present study.

Further evidence of the extent of physical underdevelopment at birth of children in the present study was obtained from the mother's statement regarding the timing of birth (table 2).

Table B. Percent of U.S. children of 6-11 years in 1963-65, by birth weight and mother's statement regarding timing of birth

Birth weight	Timing of birth			
	All births	Early	Expected	Late
	Percent of children			
Total	100.0	16.3	70.2	13.5
Less than 5 pounds	2.9	2.3	0.6	0.0
5-10 pounds	95.8	13.9	68.8	13.1
More than 10 pounds	1.3	0.1	0.8	0.4

NOTE: $\chi^2 = 9.1$, $n = 4$, $p < .06$.

Seventy percent were born when expected, while 16 percent were born earlier and 14 percent later than expected. Comparison of responses to this question with the distribution of U.S. live births in 1950-67 by period of gestation[9] shows a pattern similar to that for birth weight. Relatively fewer children in the present study than all children born from 1950 through 1957 were reported as born earlier than expected, and relatively more were born when expected or later, again roughly reflecting the greater risk of death among underdeveloped children.

The extent of agreement between birth weight of children in the present study and the mother's statement regarding the timing of birth may be seen in table B.

Children weighing less than 5 pounds at birth were slightly more likely than were children weighing 5 pounds or more to have been born earlier than expected. The relationship between these two measures of the stage of development of these children at birth is not significant at the 5-percent probability level ($\chi^2 = 9.1$, $n = 4$, $p < .06$). Moreover, their pattern of association with other factors related to or affecting growth and development is similar.

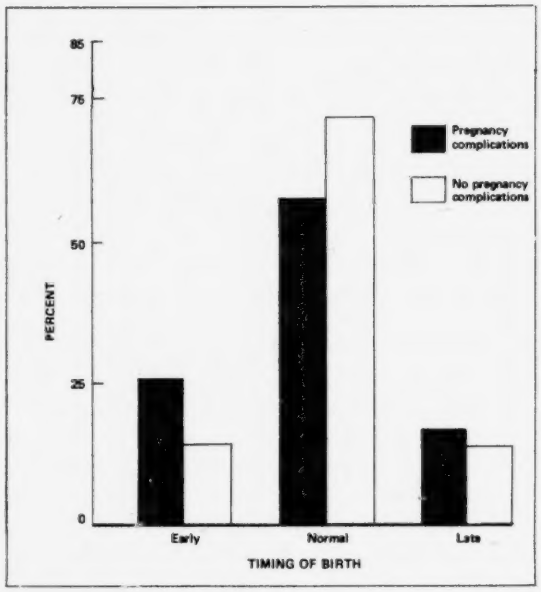

Figure 2. Percent distribution of timing of birth for mothers with and without pregnancy complications: U.S. children of 6-11 years in 1963-65.

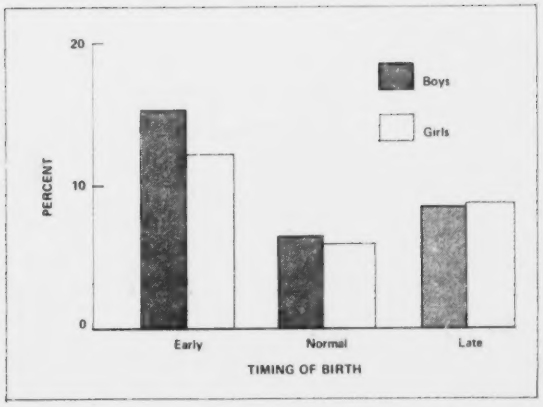

Figure 3. Prevalence of birth defects for boys and girls by timing of birth: U.S. children of 6-11 years in 1963-65.

The group physically underdeveloped at birth, on the basis of birth weight or mother's statement of timing, were more likely than normal children to have mothers who had medical problems or complications during this pregnancy, as shown in figure 2, with respect to timing. No relationship was found between the stage of physical development at birth and the prenatal medical care given the mother.

In this study birth defects (harelip, cleft palate, clubfeet, congenital heart conditions, etc.) were reported by the parent for an estimated 1.9 million children, or 8 percent of the U.S. noninstitutionalized children aged 6-11 years in 1963-65. Boys were found just slightly more likely than girls to have such defects (8 percent compared with 7 percent, the difference not being statistically significant at the 5-percent probability level), and no consistent age-related trend was evident (table 3).

The relationship of birth defects to other conditions at the time of birth is generally as would be anticipated. As shown in figure 3, children born earlier than expected were significantly more likely to have a birth defect (14 percent) than those born later (9 percent) or when expected (6 percent). Similarly, children weighing less than 5 pounds at birth were more likely to have a birth defect than those who weighed more (figure 4). In addition, the prevalence of birth defects was nearly three times as great among children whose mothers had some medical problem or complication during pregnancy (17 percent) than among those whose mothers did not (6 percent) (table 4 and figure 5). No significant association was found between the presence of a birth defect and the fact that the mother saw a doctor during her pregnancy nor with the timing of her initial prenatal doctor visit. Those mothers whose children did have birth defects were slightly more likely than those whose children did *not* to have received some prenatal medical care and to have gone in early, during the first or second trimester. Presumably this is because their need for such care was greater.

Hospital Care

Ninety-two percent, or 22.1 million of the 24 million noninstitutionalized children 6-11 years of age in this country in 1963-65, were born in a hospital. The proportion among children under 11 years of age was slightly higher than for the 11-year-olds, consistent with the increasing trend in hospital utilization for confinement and delivery during the 1951-59 period,[10] when these children were born (table 5).

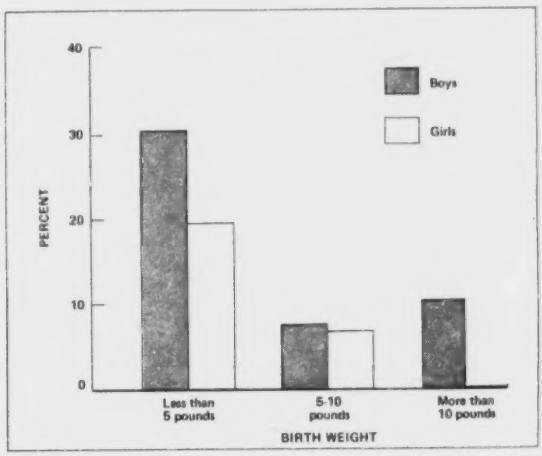

Figure 4. Prevalence of birth defects for boys and girls by birth weight: U.S. children of 6-11 years in 1963-65.

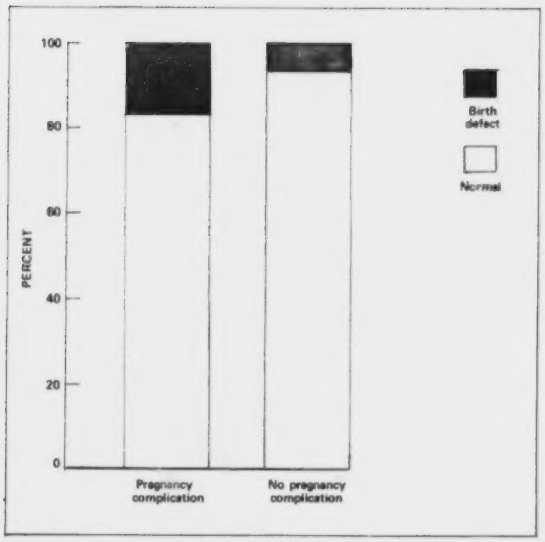

Figure 5.. Percent of U.S. children of 6-11 years in 1963-65 with and without birth defects whose mothers did and did not have pregnancy complications.

Comparison between children born in a hospital and those born elsewhere with respect to prenatal medical care, condition of mother during pregnancy, and condition of child at birth are shown in table C. It is apparent here that children whose mothers had seen a doctor during pregnancy were nearly three times as likely to have been born in a hospital as those whose mothers had not consulted a doctor during pregnancy. Furthermore, the earlier during her pregnancy of the mother's first doctor visit, the more likely the child was to have been born in a hospital.

Children born in a hospital were more frequently reported as having been born earlier or later than expected, while those born elsewhere were more frequently said to have been born when expected. The disproportionate number of early births in a hospital probably reflects the fact that mothers with some pregnancy complications were more likely to have an early delivery (26 percent compared with 15 percent among those with no complications) and to have been hospitalized at the time of birth (95 percent compared with 92 percent without complications). The association of birth defects and pregnancy complications with greater hospital utilization is reflected in the disproportionately greater number of birth-defective children born in hospitals (97 percent of those with birth defects compared to 92 percent of those without). The group not born in hospitals may also be seen to include a disproportionately greater number whose birth weights were in excess of 10 pounds.

Table C. Percent of U.S. children of 6-11 years in 1963-65 born in hospitals and not born in hospitals, by selected health characteristics of mother and child

Characteristic	Children born in a hospital	Children not born in a hospital
	Percent of children	
Mother's prenatal care		
Did not see doctor	36.5	63.5
Saw doctor	93.9	6.1
Initial doctor visit in:		
First trimester	96.3	3.7
Second trimester	91.0	9.0
Third trimester	82.1	17.9
Pregnancy complications		
Some	95.4	4.6
None	91.9	8.1
Timing of birth		
Early	98.2	1.8
Normal	90.0	10.0
Late	96.9	3.1
Birth defect		
Some	96.6	3.4
None	91.9	8.1
Birth weight		
Less than 5 pounds	94.8	5.2
5-10 pounds	92.6	7.4
More than 10 pounds	77.6	22.4
Present health		
Very good	92.6	7.4
Good	90.1	9.9
Fair	83.2	16.8
Poor	95.2	4.8

NOTE: 92.3 percent of these children were born in hospitals and 7.7 percent elsewhere.

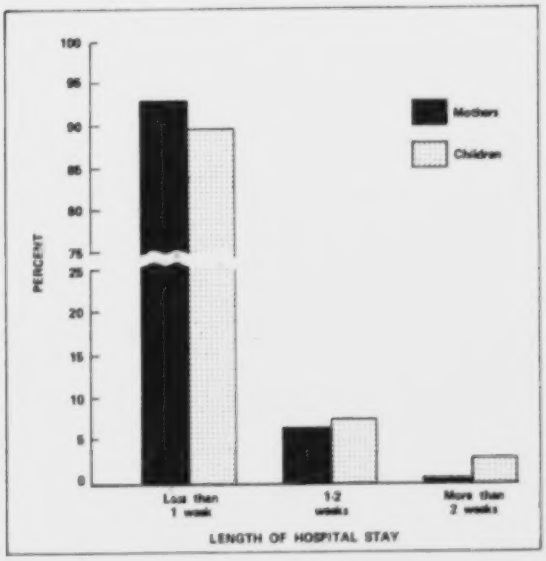

Figure 6. Percent distribution of length of postpartum hospital stay for mothers and for their children: U.S. children of 6-11 years in 1963-65.

The length of hospitalization for those children 6-11 years of age in 1963-65 who were born in a hospital is slightly more than that for their mothers. Ninety-three percent of the mothers were released after 1 week or less, as compared with nearly 90 percent of the children. Less than 1 percent (0.5) of the mothers stayed longer than 2 weeks, as compared with 3 percent of the children. Both differences are statistically significant (table 5 and figure 6).

The extent of agreement between length of hospital stay of the mother and child after birth may be seen in table 6. When the mother was discharged early (within a week) the children in this study were substantially more likely also to have been discharged early.

When the mother had medical problems or complications during pregnancy, both mother and child were hospitalized longer than if the mother had a normal pregnancy, as indicated in figure 7.

Health in Infancy

Health problems in infancy were reported by parents for an estimated 14 percent, or 3.4

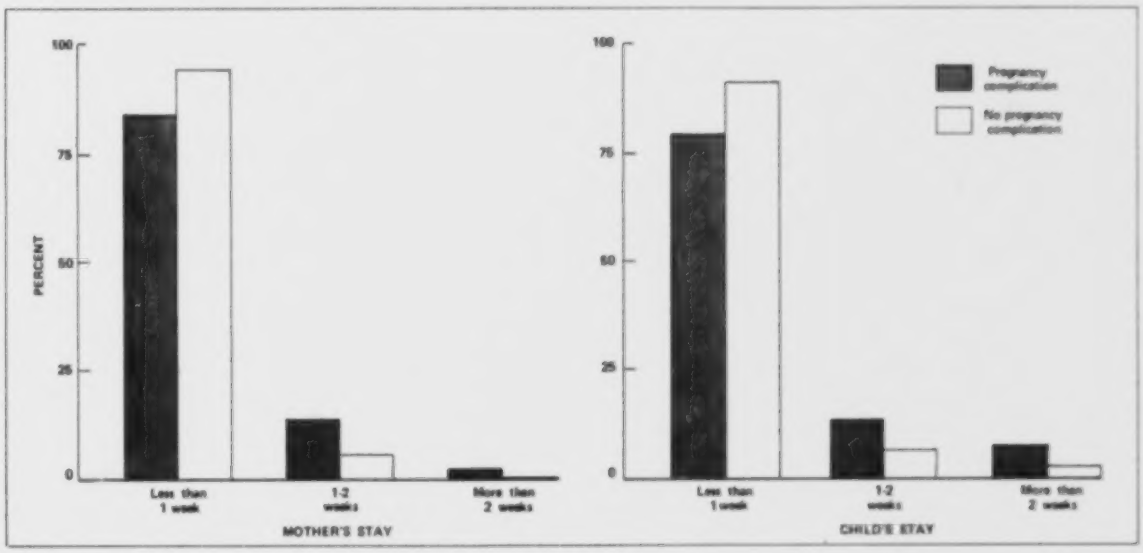

Figure 7. Percent distribution of length of postpartum hospital stay for mothers with and without pregnancy complications and for their children: U.S. children of 6-11 years in 1963-65.

million, of the noninstitutionalized American children 6-11 years of age in 1963-65 (table 7). In the majority of these instances (98 percent) a doctor had been consulted about the problem.

No relationship was evident between the extent of prenatal medical care and the existence of a health problem during infancy. The proportion having health problems in infancy was slightly higher among those whose mothers had seen a doctor during pregnancy than those who had not (table D). As would be expected, significant relationships were found between the prevalence of health problems in infancy, pregnancy complications of the mother, timing of birth, birth defects, and birth weight of the child. The prevalence of health problems in infancy was over twice as great among children whose mothers reported complications during pregnancy than among others (27 percent compared with 12 percent). The prevalence of health problems in infancy was nearly five times as great among children with birth defects as among those without. It is further evident that children born earlier than expected and those weighing less than 5 pounds at birth were substantially more likely than other children to have had health problems during infancy.

With respect to general health status during the first year of life, nearly 91 percent of these children were reported to have been in good health, 8 percent in fair, and nearly 2 percent in poor health (table 7). Significant associations similar to those with respect to specific health problems were found between the general health status of the child during infancy, the condition of the mother during pregnancy, and the condition of the child at birth. Birth defects were more prevalent than expected among those in fair or poor health during infancy and less prevalent among normal infants (figure 8). Also, proportionately more children who weighed under 5 pounds at birth than those weighing 5 pounds or more were in fair or poor health during infancy (table 8).

The association between timing of birth, as determined in this study, and health status of the child during infancy is significant but less strong than that with birth weight (table 9). Proportionately fewer of those children born early than those born at term or later remained in good health during infancy. A similar relationship was found between the health status of the mother during pregnancy and the health of the child in infancy. Proportionately more than twice as many children whose mothers had pregnancy complications were rated in poor or fair health during their first year of life than those whose mothers had no such prenatal problems (figure 9).

Table D. Percent of U.S. children of 6-11 years in 1963-65 with infant health problems, by selected health characteristics of mother and child

Characteristic	Children with infant health problems
Mother's prenatal care	Percent of children
Saw doctor	14.5
Did not see doctor	11.5
Pregnancy complications	
Some	27.2
Doctor consulted	99.4
None	12.4
Doctor consulted	97.2
Birth defect	
Some	53.9
None	11.0
Timing of birth	
Early	21.9
Normal	12.7
Late	14.7
Birth weight	
Less than 5 pounds	28.8
5-10 pounds	14.0
More than 10 pounds	17.8

Breast Feeding

Some change with respect to the practice of breast feeding during the time the children in this study were infants is suggested by these findings. Thirty-four percent of these children 6-11 years of age in 1963-65 were reported to have been

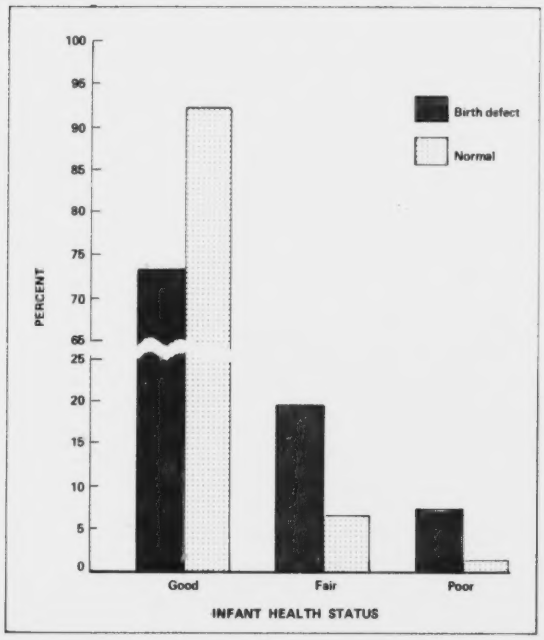

Figure 8. Percent distribution of infant health status for normal and for birth defective U.S. children of 6-11 years in 1963-65.

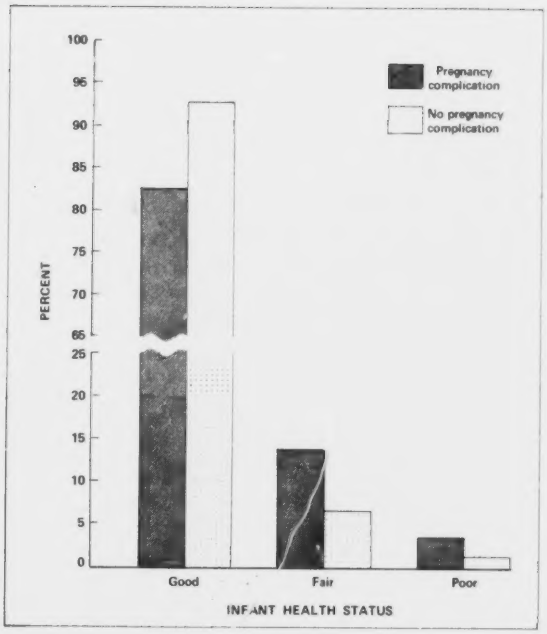

Figure 9. Percent distribution of infant health status according to whether or not mothers had pregnancy complications: U.S. children of 6-11 years in 1963-65.

breast fed during infancy. This proportion increases with age (table 10) and is significantly larger among the older children (10 and 11 years for boys and 9-11 years for girls) than among the younger children. One-fourth of the children were breast fed for less than 1 month, 49 percent for 1-6 months, and nearly 26 percent for more than 6 months. The proportion breast fed less than 1 month was lower among the younger children (6 and 7 years) than among the older group. The transition from breast feeding to other foods was accepted without a problem for more than 90 percent of the children, a pattern that was essentially invariant with age. Some degree of difficulty in weaning was experienced by 8 percent of these children, while only 2 percent had a considerable problem in accepting the change.

Children who were born earlier or later than the normal term of pregnancy were significantly more likely than full-term infants to have been breast fed less than 1 month (35 and 32 percent compared with 22 percent). Proportionately twice as many children who were normal-term infants as those born earlier or later than expected were breast fed longer than 6 months (30 percent compared with 15 and 16 percent). (See table 11 and figure 10.)

An association between length of breast feeding and acceptance of change to other foods for these children is evident in table 12. Those breast fed over 6 months were more likely than those fed this way 6 months or less to have had some problem in making the change to regular food (13 percent compared with 6 percent for 1-6 months and 7 percent for less than 1 month). The proportion having considerable problem in making the change remained essentially invariant with the length of time breast fed—2 percent or less in each group.

Children not born in hospitals were more likely to be breast fed than those who were (62 percent compared with 32 percent) and, if breast fed, to continue it longer than 6 months (49 percent compared with 22 percent).

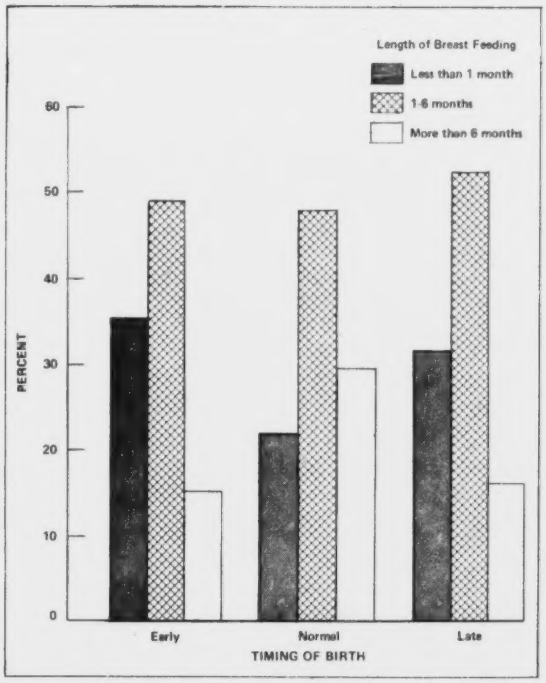

Figure 10. Percent distribution of length of breast feeding by timing of birth for U.S. children of 6-11 years in 1963-65.

Some relationship was found between the health of children during infancy and the practice of breast feeding. The proportion breast fed during infancy was significantly lower among those reported as in poor health than among those in fair or good health (23 percent compared with 34 percent in the latter two groups) (figure 11).

Present Health

Some rough indication of the extent to which early health problems of these children aged 6-11 years in 1963-65 may have affected or be affecting their normal growth and development can be obtained from their health status at the time of this survey. At that time, 52 percent of the children were reported to be in very good health, 43 percent in good health, 5 percent in fair health, and 0.4 percent in poor health (table 13).

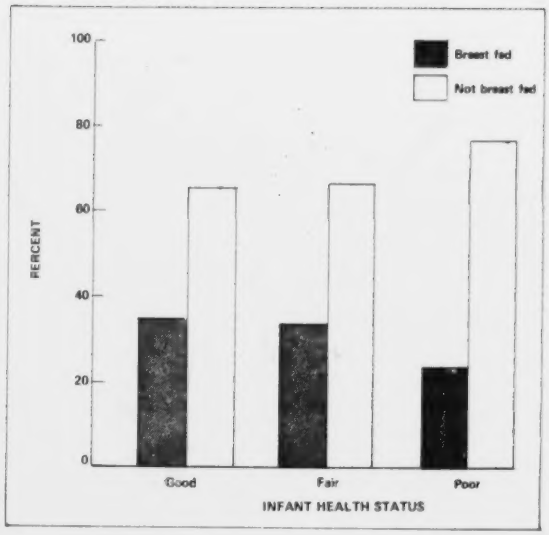

Figure 11. Percent of U.S. children of 6-11 years in 1963-65 breast fed and not breast fed by infant health status.

Relatively more children born in hospitals than those born elsewhere were rated as in very good health at the time of this study (53 percent compared with 36 percent), as shown in table C.

The association between present health status of these children and their health during infancy was negligible ($\chi^2=7.2$, $n=3$, $p=.07$) (figure 12). Those whose health was rated good in infancy were somewhat more likely than the rest to be considered in very good health at present, while those in fair or poor health during infancy were more likely than others to be rated as in fair or poor health.

Income

The pattern of relationship of prenatal and postnatal health needs and care of noninstitutionalized American children 6-11 years of age in 1963-65 and their mothers with respect to their family income at the time of this survey are considered here (table 14). Subsequent sections of this report contain analyses of relationships with education of the father (or other parent if considered head of the family), region, race, and place of residence.

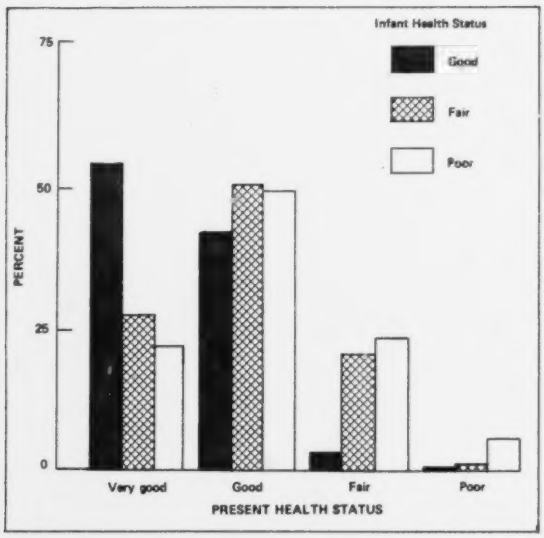

Figure 12. Percent distribution of present health status by infant health status: U.S. children of 6-11 years in 1963-65.

Prenatal care.—Utilization of prenatal medical care shows a consistent, significant relationship with family income. Mothers in families with annual income under $5,000 were substantially less likely (91 and 97 percent for income groups "less than $3,000" and "$3,000-4,999," respectively) than those in families with income of $5,000 or more (nearly 100 percent) to have consulted a doctor during pregnancy. When they did consult a doctor at that time, those in the two lowest income levels were less likely to have seen their doctor at least four times (84 and 95 percent compared with 98 percent or more). Those in families with income of less than $3,000 were also significantly less likely to have seen a doctor four times or more than those in the $3,000-4,999 bracket.

Early prenatal medical care (during the first trimester of pregnancy) was obtained substantially less frequently by mothers in families with income under $3,000 (89 percent) and slightly less frequently by those in the $3,000-4,999 bracket (96 percent) than by those with $5,000 or more annual income (98-99 percent).

Complications of pregnancy were reported slightly more frequently among the mothers of these children from the lowest (less than $3,000) and highest ($15,000 or more) income levels, but no significant relationship of such conditions with income was evident here.

Condition at birth.—The proportion of these children born earlier than expected increased consistently from 11 percent among those in families with less than $5,000 annual income to 25 percent among those with annual income of $15,000 or more. The proportion born later than expected shows a similar, but not as consistent, increase with income from 7 percent for those in the lowest income bracket to 18 percent for those in the highest.

Birth defects were slightly but not significantly less prevalent among children from the lower than the higher income level families (7 and 6 percent for those under $5,000 compared with 10 and 11 percent for families with incomes of $10,000 or more).

Slightly more children from families with under $3,000 annual income weighed less than 5 pounds at birth (4 percent) than those in the $3,000 or higher brackets (2-3 percent), while the proportion weighing over 10 pounds was just slightly higher at both extremes of income (2 percent) than at the intervening levels (1 percent). None of these relationships between birth weight of the child and income of his family were significant, however.

Hospital care.—A significant association is evident here between family income and the reported extent of hospital care during and after delivery. Children from the more economically advantaged families were more likely than others to have been born in hospitals. Percentages for those in families with less than $3,000 and $3,000-4,999 are 74 and 92 percent, respectively, while the figure is 98-100 percent for those in the $5,000 or higher income brackets. Differences in proportion among the three groups are statistically significant at the 5-percent probability level.

Length of hospital stay for mother and child after birth shows only a negligible association with income level of the family. Those in the

highest income bracket, $10,000 and over, stayed a substantially longer length of time than the others. The proportion discharged within 1 week generally decreased slightly with increasing income up to the $10,000 bracket—from 94 to 92 percent for the mothers and from 91 to 88 percent for the children. Then it dropped significantly at the highest income level—to 86 percent for the mothers and 84 percent for the children. The proportion staying longer than 2 weeks remained essentially invariant with income (at 3 percent) for the children and decreased only slightly for the mothers (from 1 to less than 1 percent).

Health in infancy.—The reported prevalence of health problems during infancy for these children was substantially higher among those in families with annual family income of $15,000 or more (20 percent) than those in the lower income groups (13-16 percent). A doctor was consulted regarding the problem for significantly fewer of those in the lowest income level (94 percent) than those from the more economically advantaged families (98-100 percent).

An association is also evident here between the general health status of the children during infancy and their family income. The proportion reported to be in fair or poor health in that year decreased from 13 percent at the lowest income level to 6 percent among those in families with annual income of $15,000 or more.

Breast feeding.—Children from the lower income level families were more frequently breast fed than other children. The proportion decreased significantly from 44 percent and 36 percent among those in families with less than $3,000 and $3,000-4,999 annual incomes, respectively, to 28-31 percent among those in families with $5,000-$14,999 annual income. The proportion increased again to 36 percent among those in the highest income levels, though the gain is not large enough to be considered statistically significant here.

A significant association was found between the length of time the child was breast fed and the economic status of his family. The proportion breast fed longer than 6 months decreased consistently from 45 percent among those with annual family income of less than $3,000 to 7 percent at the highest income level.

Consistent with the findings for all children in this study, the association between length of time breast fed and problem in weaning or making the change to regular food was found across all income levels. The proportion of children who had some or considerable problem in making the change decreased from 13 percent at the lowest to 5 percent at the highest income bracket.

Parent's Education

The pattern of prenatal and postnatal health needs and care for these children and their mothers with respect to the second socioeconomic factor considered here—education of the family head—is generally similar to that found for family income. This is to be expected because of the strong association between family income and parent's education in this population segment ($r = .58$).

Prenatal care.—Relatively fewer mothers in families where the family head had completed less than 5 years of formal schooling than those in families with more education had consulted a doctor during pregnancy and, if they did, had their first visit with a doctor early, during the first trimester. The respective proportions were significantly lower than among the groups with more education (table 15).

No relation was found between pregnancy complications and father's education, though the proportion of mothers with such medical problems was slightly higher among the better educated families (fathers with 17 years or more of schooling completed).

Condition at birth.—The proportion of these children reported to have been born earlier or later than expected is positively associated with the educational level of father. The proportion born early increased threefold—from 7 percent among parents with less than 5 years formal schooling to 23 percent among those with 16 years. Among children born later than expected, the proportion increased ninefold—from 2 percent for parents with less than 5 years to 19 percent among those who had completed 13-15 years of schooling.

The prevalence of birth defects was slightly, but not significantly, less among those from families whose parent had less than 12 years of formal education than among those with parents having 12 years or more.

No relationship was found between birth weight of child and education of parent.

Hospital care.—Relatively fewer children from homes where the parent had less than 5 years schooling (58 percent) or only 5-7 years (80 percent) were born in hospitals than those from homes where the parent had more education (93-99 percent). The proportion may be seen to increase consistently with the educational level of the parent up to 16 years of schooling.

No consistent, significant association was found between the length of stay of the mother or child in the hospital following birth and the education of the parent who was head of the household.

Health in infancy.—The proportion of children with health problems in infancy increased consistently with parent's education from 11 percent among those whose parent had less than 5 years schooling to 18 percent for those with 17 years or more. Those in the families with least education were also slightly less likely to have consulted a doctor about the condition.

Health status of these children during infancy was also clearly related to the educational level of their parents. Children whose parents had the least education were more frequently rated in fair or poor health during their first year of life than other children, the percent decreasing from 15 percent among those with less than 8 years of schooling to 5 percent among those with 16 years or more.

Breast feeding.—Children whose parent had a minimal education (less than 8 years) or was at least a college graduate (16 years or more schooling) were more likely to have been breast fed than were other children. The percentages at the extremes were 47 and 43 percent for levels less than 8 years and 40 and 43 percent for children whose parent had 16 years or more education compared with 26-33 percent for those in the intermediate educational levels with 8-15 years of formal schooling.

When children were breast fed, those whose parent had less education were more likely than those whose father was better educated to continue this for a longer period of time. The proportion of children breast fed 6 months or longer decreased steadily from 55 percent for those families where the parent had less than 5 years schooling to 7 percent among those with 17 years or more education. Problems with the stopping of breast feeding showed no consistent trend in relation to the education of the parent.

Region

Striking regional differences were found in this study with respect to nearly every aspect of the health needs and care of children 6-11 years of age in 1963-65 during their infancy and of their mothers during the prenatal period.

Prenatal care.—Mothers of children in the South were significantly less likely (95 percent) and those from the West slightly less likely than those from the Northeast and Midwest (99.3 and 99.7 percent) to have consulted a doctor during this pregnancy. For those who did consult a doctor, the extent of care as measured by number of visits (four or more) was also significantly less in the South (90 percent) than elsewhere (95-98 percent) (table 16).

Early medical care during pregnancy was obtained significantly less frequently by mothers of children in the South than those in the Northeast or West and slightly less often than in the Midwest. Relatively more mothers of children in the South than elsewhere waited until the third trimester of pregnancy before consulting a doctor.

No regional differentials were found with respect to the prevalence of pregnancy complications among the mothers of these children.

Condition at birth.—With respect to the normal term of pregnancy, relatively fewer children in the South than elsewhere were born earlier or later, the differences in rates being large enough to be considered statistically significant except when compared with late births in the West. In the South 12 percent were born early as compared with 17 and 18 percent elsewhere, while 9 percent from the South were born later then expected as compared with 13-16 percent in the other three regions.

Birth defects were found less frequently among children in the West (6 percent) and

South (7 percent) than those from the Northeast and Midwest, where the prevalence rate was 9 percent. Only the difference between the extremes of these rates is large enough to be considered statistically significant, or to have exceeded the 95-percent confidence interval.

Relatively more children from the South than elsewhere weighed less than 5 pounds or more than 10 pounds at birth. Here again the regional differences, except at the extremes, are too small to be significant. That is, significantly more children in the South than in the Midwest had a low birth weight, while significantly more in the South than in the Northeast and West had a high birth weight.

Hospital care.--Children in the South were significantly less likely (82 percent) to have been born in a hospital than those in the Northeast or Midwest (98 percent) and slightly less likely than those in the West (92 percent).

The length of stay of both mother and child in the hospital following birth was significantly longer in the Northeast than in the other three regions of the country.

Health in infancy.—The prevalence of health problems during their infancy among these children 6-11 years in 1963-65 was slightly but not significantly greater in the Northeast and Midwest than elsewhere. No regional differential with respect to medical care obtained for the condition is evident.

With respect to general health status in infancy, relatively more children in the South (12 percent) were reported as having been in fair or poor health than in the other three regions, where the rates were 8-9 percent.

Breast feeding.--Children from the South and West were substantially more likely to have been breast fed (42 and 41 percent) than those in the Northeast (20 percent) or Midwest (32 percent). Among those who were breast fed, children from the South were found to have been fed this way longer than those in the other three regions. Forty percent of children in the South were breast fed more than 6 months compared with 16 to 23 percent in the other regions, while only 18 percent in the South were weaned within 1 month compared with 24-32 percent elsewhere.

The change from this type of feeding was more often a problem among Southern children than others, though the regional differences in this respect were not as great as might have been expected on the basis of the regional differences in the length of time breast fed.

Race

Consideration is limited here to the white and Negro children in this study. The proportion of other races in the population, and hence in the sample examined, was too small to give reliable estimates for this heterogeneous group. Since a disproportionate number of Negro children live in the South, the findings with respect to that racial group will also reflect patterns in that region.

Prenatal care.--Medical care during pregnancy was obtained slightly more frequently for the mothers of the white than the Negro children in this study. Ninety-eight percent of the white group compared with 96 percent of the Negro group had consulted a doctor, while among those who had visited a doctor, 96 percent of the mothers of white children had made more than four visits compared with 93 percent for mothers of Negro children. These differences are too small to be considered statistically significant.

Early prenatal medical care was substantially more likely to have been obtained by the mothers of white than Negro children—64 percent of the white group had seen a doctor during the first trimester of pregnancy compared with 45 percent of the Negro group (figure 13).

Pregnancy complications were reported nearly as frequently among mothers of white as of Negro children, the difference in rates being negligible.

Condition at birth.--With respect to the normal term of pregnancy, relatively more white than Negro children in this study were reported to have been born early (17 percent compared with 10 percent) or late (15 percent compared with 4 percent), the differences being statistically significant at the 5-percent probability level (figure 14). But of those born early, substantially more Negro than white children were born over 4 weeks early (38 compared with 23 percent).

Birth defects were found slightly more frequently among white than Negro children (8 percent compared with 6 percent).

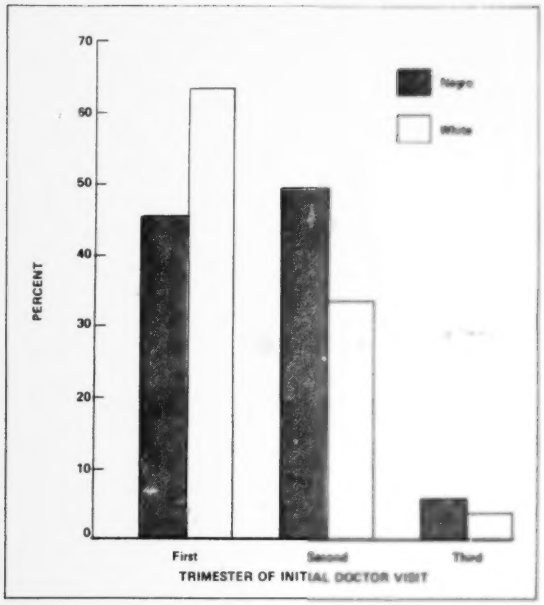

Figure 13. Percent distribution of trimester of initial doctor visit during pregnancy for mothers of white and Negro U.S. children of 6-11 years in 1963-65.

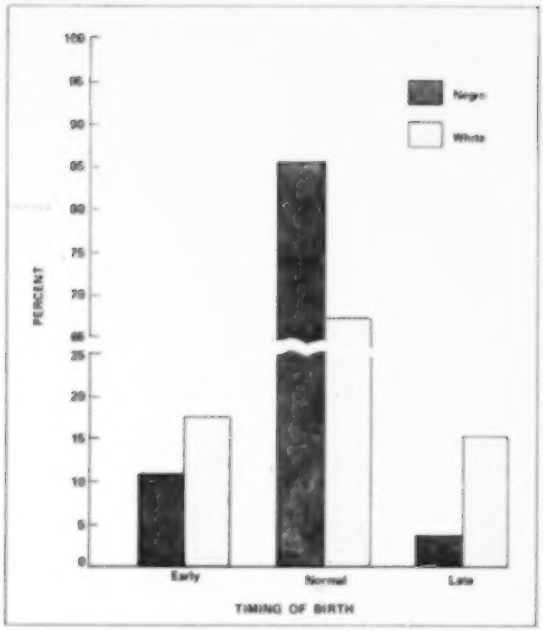

Figure 14. Percent distribution of timing of birth for white and Negro U.S. children of 6-11 years in 1963-65.

Relatively fewer white than Negro children weighed under 5 pounds at birth (3 compared with 5 percent, the difference being statistically significant), while the difference in proportion of heavier babies (over 10 pounds) was negligible (1.2 percent, white; 1.5 percent, Negro) (figure 15).

Hospital care.—Substantially more white than Negro children 6-11 years of age in 1963-65 were born in hospitals (94 percent compared with 79 percent). However, when confined in a hospital, no significant racial differences are evident with respect to the length of stay of the mother or child.

Health in infancy.—The prevalence of health problems in infancy was greater among white than Negro children—15 percent compared with 12 percent, a difference which is statistically significant at the 5-percent probability level. Slightly more white than Negro children with such problems were taken to a doctor for care.

With respect to their general health during infancy, white and Negro children were similar. About 90 percent of each group were considered in good health, 8 percent fair, and 2 percent poor.

Breast feeding.—Relatively more Negro than white children were breast fed—43 percent compared with 32 percent, the difference being statistically significant at the 1-percent probability level. With respect to the length of this type of feeding, Negro children were breast fed substantially longer than white children (36 percent compared with 24 percent were fed this way longer than 6 months), and a significantly larger proportion encountered some difficulty in making the change to normal food (13 percent for Negro, 8 percent for white children).

Rural Residents

While no significant urban-rural differences were found with respect to these patterns of health needs or care, data for those living in rural areas are included in table 16. Findings for the urban areas combined are very similar

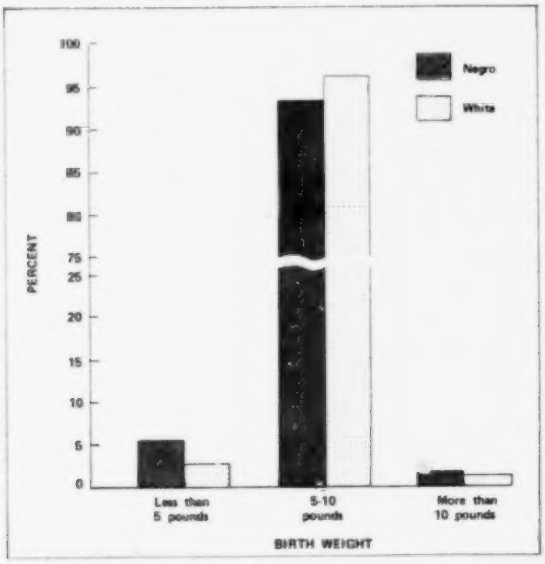

Figure 15. Percent distribution of birth weight for white and Negro U.S. children of 6-11 years in 1963-65.

to those for all children and hence have not been shown.

SUMMARY

This report contains national estimates related primarily to the infant health needs and extent of prenatal and postnatal medical care obtained for American children who were 6-11 years of age in 1963-65 and their mothers. It is based on findings from the child's medical history and birth certificate, obtained in the Health Examination Survey of 1963-65.

In this Health Examination Survey program, a probability sample of 7,417 children was selected to represent the nearly 24 million noninstitutionalized children of this age in the United States. Of these, the 7,119, or 96 percent, examined were closely representative of the child population from which they were drawn with respect to age, sex, race, region, and other available demographic and socioeconomic variables.

Principal findings from this part of the study included:

1. More than 97 percent of the mothers of these children had obtained medical care or consultation at least once during this pregnancy, which would have occurred in the period from 1951-59. Sixty-one percent of these mothers who obtained some medical care at that time made their initial doctor visit during the first trimester of pregnancy.
2. Three percent of these children weighed less than 5 pounds at birth, and 1 percent weighed more than 10 pounds, according to data recorded on their birth certificates.
3. Physically underdeveloped infants, as determined by birth weight or mother's statement of whether delivery was earlier than expected, were more likely than normal infants to have mothers who reported having medical problems or complications during this pregnancy.
4. Birth defects were reported among 8 percent of these children and were not significantly more frequently found among boys than girls.
5. Ninety-two percent of these children were born in a hospital.
6. An estimated 14 percent of these children were reported to have had health problems during infancy, with a doctor being consulted for 98 percent of those with such problems. Only 2 percent were considered to have been in poor health during their first year of life.
7. About one-third of these children were reported to have been breast fed during infancy.
8. Children in good health at the time of this survey were only slightly more likely than those whose health was considered fair or poor to have been in good health and free of health problems during infancy.

Differentials in prenatal and postnatal medical care and needs among these children are analyzed with respect to family income, educa-

tion of father (or other head of the family), race, and by region and rural areas.

Comparisons with available data for all live-born children in the period during which children in the present study were born (1951-59) with respect to prenatal care for their mothers and their birth weight are included.

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Table 1. Percent of children of 6-11 years in 1963-65, by extent and timing of mother's prenatal medical care and age of child at time of survey, with standard errors for totals: United States

Extent and timing of prenatal care	Total percent	Standard error of total	Age in years					
			6	7	8	9	10	11
			Percent of children					
Saw doctor	97.5	0.67	97.8	97.5	97.8	96.8	97.9	96.9
Did not see doctor	2.5	0.67	2.2	2.5	2.2	3.2	2.1	3.1
1-3 total doctor visits	4.7	0.57	4.2	3.9	5.7	5.5	4.3	4.4
4 total doctor visits or more	95.3	0.57	95.8	96.1	94.3	94.5	95.7	95.6
Initial doctor visit in:								
First trimester	60.8	1.40	60.1	61.7	60.0	59.8	61.4	62.0
Second trimester	35.6	1.36	35.8	35.6	35.5	36.6	35.5	34.2
Third trimester	3.6	0.27	4.1	2.7	4.5	3.6	3.1	3.8
1-3 total doctor visits; initial visit in:								
First trimester	16.4	2.07	13.7	14.8	18.8	18.8	11.5	19.6
Second trimester	52.5	3.93	56.8	49.8	51.3	47.5	60.3	50.8
Third trimester	31.1	3.62	29.5	35.4	29.9	33.7	28.2	29.6
4 total doctor visits or more; initial visit in:								
First trimester	63.6	1.42	62.9	63.4	63.0	62.6	64.0	65.4
Second trimester	34.3	1.38	34.2	35.4	34.3	35.6	34.2	32.3
Third trimester	2.1	0.11	2.9	1.2	2.7	1.8	1.8	2.3

Table 2. Percent of children of 6-11 years in 1963-65, by birth weight, timing of birth, age at time of survey, and sex, with standard errors for totals: United States

Age and sex	Birth weight			Timing of birth			Early births	
	Less than 5 pounds	5-10 pounds	More than 10 pounds	Early	Normal	Late	More than 4 weeks	1-3 weeks
	Percent of children							
Both sexes								
6-11 years	2.9	95.8	1.3	16.3	70.2	13.5	24.2	75.8
6 years	3.6	95.3	1.1	19.1	68.1	12.8	22.8	77.2
7 years	2.6	96.0	1.4	16.2	69.1	14.7	23.8	76.2
8 years	3.1	95.7	1.2	15.6	71.7	12.7	27.4	72.6
9 years	3.0	96.1	0.9	17.2	68.8	14.0	30.0	70.0
10 years	3.0	95.7	1.3	15.3	71.6	13.1	19.4	80.6
11 years	2.2	96.0	1.8	14.2	71.9	13.9	20.3	79.7
Boys								
6-11 years	2.5	95.8	1.7	17.5	69.1	13.4	22.5	77.5
6 years	3.2	95.3	1.5	19.1	68.0	12.9	23.0	77.0
7 years	2.9	94.9	2.2	17.9	67.1	15.0	21.0	79.0
8 years	2.7	96.6	0.7	17.9	69.3	12.8	26.8	73.2
9 years	2.5	96.6	0.9	18.5	68.2	13.3	30.1	69.9
10 years	2.2	96.0	1.8	15.4	70.6	14.0	12.5	87.5
11 years	1.7	95.4	2.9	15.8	72.0	12.2	18.4	81.6
Girls								
6-11 years	3.4	95.7	0.9	15.1	71.2	13.7	26.2	73.8
6 years	4.0	95.3	0.7	19.1	68.2	12.7	22.7	77.3
7 years	2.3	97.1	0.6	14.4	71.2	14.4	27.6	72.4
8 years	3.6	94.8	1.6	13.1	74.4	12.5	28.3	71.7
9 years	3.7	95.5	0.8	15.8	69.5	14.7	29.9	70.1
10 years	3.9	95.3	0.8	15.2	72.6	12.2	26.7	73.3
11 years	2.7	96.6	0.7	12.5	71.8	15.7	22.8	77.2
	Standard error							
Both sexes 6-11 years	0.23	0.25	0.13	0.71	0.94	0.77	1.37	1.37
Boys 6-11 years	0.28	0.37	0.24	0.84	0.94	0.73	1.51	1.51
Girls 6-11 years	0.40	0.41	0.15	0.96	1.28	1.06	1.88	1.88

Table 3. Percent of children of 6-11 years in 1963-65 with and without birth defects, by timing of birth, birth weight, age at time of survey, and sex, with standard errors for totals: United States

Age and sex	Birth defect	No birth defect	Timing of birth						Birth weight					
			Early		Normal		Late		Less than 5 pounds		5-10 pounds		More than 10 pounds	
			Birth defect	No birth defect	Birth defect	No birth defect	Birth defect	No birth defect	Birth defect	No birth defect	Birth defect	No birth defect	Birth defect	No birth defect
	Percent of children													
Both sexes														
6-11 years---	7.8	92.2	13.8	86.2	6.3	93.7	8.6	91.4	24.0	76.0	7.3	92.7	6.8	93.2
6 years----------	7.6	92.4	13.0	87.0	5.9	94.1	8.7	91.3	17.6	82.4	7.1	92.9	15.0	85.0
7 years----------	7.4	92.6	11.7	88.3	6.2	93.8	9.3	90.7	28.0	72.0	7.0	93.0	3.3	96.7
8 years----------	7.3	92.7	13.2	86.8	5.5	94.5	10.6	89.4	13.0	87.0	7.2	92.8	6.0	94.0
9 years----------	7.9	92.1	14.5	85.5	6.7	93.3	6.6	93.4	27.8	72.2	7.4	92.6	-	100.0
10 years---------	9.5	90.5	16.1	83.9	8.0	92.0	9.0	91.0	35.2	64.8	8.4	91.6	10.2	89.8
11 years---------	7.2	92.8	14.5	85.5	5.5	94.5	7.3	92.7	26.5	73.5	6.8	93.2	5.7	94.3
Boys														
6-11 years---	8.4	91.6	15.2	84.8	6.5	93.5	8.5	91.5	30.1	69.9	7.7	92.3	10.2	89.8
6 years----------	8.9	91.1	15.8	84.2	7.6	92.4	6.2	93.8	9.4	90.6	8.7	91.3	21.4	78.6
7 years----------	9.1	90.9	13.9	86.1	7.2	92.8	11.9	88.1	43.6	56.4	8.2	91.8	4.1	95.9
8 years----------	8.2	91.8	16.5	83.5	5.5	94.5	10.4	89.6	13.4	86.6	8.0	92.0	18.7	81.3
9 years----------	7.7	92.3	16.5	83.5	5.6	94.4	6.8	93.2	46.9	53.1	6.7	93.3	-	100.0
10 years---------	8.2	91.8	12.7	87.3	7.3	92.7	5.4	94.6	52.6	47.4	6.8	93.2	14.8	85.2
11 years---------	8.1	91.9	15.1	84.9	6.0	94.0	10.4	89.6	25.7	74.3	7.9	92.1	7.0	93.0
Girls														
6-11 years---	7.3	92.7	12.1	87.9	6.0	94.0	8.6	91.4	19.4	80.6	6.9	93.1	-	100.0
6 years----------	6.3	93.7	10.1	89.9	4.2	95.8	11.4	88.6	24.8	75.2	5.6	94.4	-	100.0
7 years----------	5.8	94.2	9.0	91.0	5.1	94.9	6.5	93.5	8.6	91.4	5.8	94.2	-	100.0
8 years----------	6.5	93.5	8.5	91.5	5.4	94.6	10.9	89.1	12.7	87.3	6.4	93.6	-	100.0
9 years----------	8.2	91.8	12.1	87.9	7.7	92.3	6.4	93.6	15.0	85.0	8.0	92.0	-	100.0
10 years---------	10.8	89.2	19.6	80.4	8.6	91.4	13.4	86.6	26.7	73.3	10.1	89.9	-	100.0
11 years---------	6.2	93.8	13.7	86.3	5.0	95.0	4.8	95.2	27.0	73.0	5.8	94.2	-	100.0
	Standard error													
Both sexes 6-11 years--	0.43	0.43	1.31	1.31	0.46	0.46	0.87	0.87	2.42	2.42	0.41	0.41	2.91	2.91
Boys 6-11 years----	0.56	0.56	1.57	1.57	0.64	0.64	1.23	1.23	3.94	3.94	0.55	0.55	4.19	4.19
Girls 6-11 years---	0.51	0.51	1.65	1.65	0.58	0.58	1.02	1.02	3.02	3.02	0.52	0.52	-	-

Table 4. Percent of children of 6-11 years in 1963-65 whose mothers did and did not have complications during pregnancy, by timing of birth, condition at birth, age of child at time of survey, and sex, with standard errors for totals: United States

Age and sex	Pregnancy complications						No pregnancy complications					
	All births	Timing of birth			Birth defect	No birth defect	All births	Timing of birth			Birth defect	No birth defect
		Early	Normal	Late				Early	Normal	Late		
	Percent of children											
Both sexes												
6-11 years	13.0	25.5	57.5	17.0	16.8	83.2	87.0	14.8	72.1	13.1	6.4	93.6
6 years	13.4	22.5	55.7	21.8	14.7	85.3	86.6	18.4	70.2	11.4	6.3	93.7
7 years	15.1	28.6	52.5	18.9	15.8	84.2	84.9	13.6	72.3	14.1	6.1	93.9
8 years	12.6	22.3	61.3	16.4	17.7	82.3	87.4	14.6	73.1	12.3	5.7	94.3
9 years	11.6	34.0	48.8	17.2	21.2	78.8	88.4	15.0	71.5	13.5	6.3	93.7
10 years	13.2	25.6	62.6	11.8	18.5	81.5	86.8	13.8	73.0	13.2	7.8	92.2
11 years	12.1	19.7	65.3	15.0	13.6	86.4	87.9	13.3	72.7	14.0	6.3	93.7
Boys												
6-11 years	12.8	29.6	55.2	15.2	18.7	81.3	87.2	15.6	71.2	13.2	6.8	93.2
6 years	12.7	29.6	49.3	21.1	17.3	82.7	87.2	17.3	70.8	11.9	7.3	92.7
7 years	16.4	37.2	46.2	16.6	18.2	81.8	83.6	13.6	71.5	14.9	7.4	92.6
8 years	12.2	28.8	61.8	9.4	22.0	78.0	87.8	16.2	70.3	13.5	6.2	93.8
9 years	12.2	35.2	50.8	14.0	24.1	75.9	87.8	16.4	70.3	13.3	5.6	94.4
10 years	11.4	29.5	54.9	15.6	19.0	81.0	88.6	13.9	72.5	13.6	6.5	93.5
11 years	11.4	12.5	74.2	13.3	11.4	88.6	88.6	15.8	72.0	12.2	7.5	92.5
Girls												
6-11 years	13.2	21.4	59.8	18.8	14.9	85.1	86.8	14.0	73.1	12.9	6.1	93.9
6 years	14.0	15.7	61.7	22.5	12.2	87.8	86.0	19.5	69.6	10.9	5.2	94.8
7 years	13.7	17.9	60.4	21.7	12.9	87.1	86.3	13.6	73.1	13.3	4.8	95.2
8 years	12.9	15.9	60.9	23.2	13.5	86.5	87.1	13.0	75.9	11.1	5.2	94.8
9 years	10.9	32.6	46.5	20.9	17.7	82.3	89.1	13.6	72.6	13.8	7.1	92.9
10 years	15.0	22.6	68.5	8.9	18.1	81.9	85.0	13.6	73.7	12.7	9.2	90.8
11 years	12.9	26.6	56.7	16.7	15.6	84.4	87.1	10.6	73.5	15.9	5.0	95.0
	Standard error											
Both sexes 6-11 years	0.50	2.04	1.84	1.72	1.34	1.34	0.50	0.64	1.02	0.80	0.40	0.40
Boys 6-11 years	0.57	2.72	2.23	1.94	2.22	2.22	0.57	0.72	0.91	0.74	0.53	0.53
Girls 6-11 years	0.62	2.08	2.73	2.36	1.64	1.64	0.62	0.90	1.50	1.16	0.52	0.52

Table 5. Percent of children of 6-11 years in 1963-65 born in a hospital, by length of hospital stay following delivery for mother and child, age of child at time of survey, and sex, with standard errors for totals: United States

Age and sex	Child born in a hospital	Child not born in a hospital	Child born in hospital					
			Length of mother's stay			Length of child's stay		
			Less than 1 week	1-2 weeks	More than 2 weeks	Less than 1 week	1-2 weeks	More than 2 weeks
	Percent of children							
Both sexes								
6-11 years	92.3	7.7	92.9	6.6	0.5	89.6	7.4	3.0
6 years	93.0	7.0	94.5	5.2	0.3	90.9	6.1	3.0
7 years	93.2	6.8	92.7	6.8	0.5	89.1	7.9	3.0
8 years	93.1	6.9	93.0	6.5	0.5	89.3	7.6	3.1
9 years	92.4	7.6	93.2	6.1	0.7	89.4	7.6	3.0
10 years	92.3	7.7	93.2	6.5	0.3	90.0	6.8	3.2
11 years	89.7	10.3	91.0	8.3	0.7	88.2	8.9	2.9
Boys								
6-11 years	92.8	7.2	92.4	7.1	0.5	89.0	8.1	2.9
6 years	93.6	6.4	94.5	5.3	0.2	91.5	6.1	2.4
7 years	92.8	7.2	92.1	7.6	0.3	88.5	8.1	3.4
8 years	93.9	6.1	91.8	7.6	0.6	87.8	9.5	2.7
9 years	93.5	6.5	92.3	6.9	0.8	89.4	8.3	2.3
10 years	93.7	6.3	92.5	6.9	0.6	89.2	7.4	3.4
11 years	89.4	10.6	90.8	8.5	0.7	87.6	9.4	3.0
Girls								
6-11 years	91.8	8.2	93.6	6.0	0.4	90.0	6.8	3.2
6 years	92.3	7.7	94.6	5.0	0.4	90.4	6.0	3.6
7 years	93.6	6.4	93.3	6.1	0.6	89.8	7.7	2.5
8 years	92.3	7.7	94.2	5.4	0.4	90.9	5.6	3.5
9 years	91.4	8.6	94.1	5.3	0.6	89.5	6.8	3.7
10 years	90.9	9.1	93.9	6.0	0.1	90.9	6.1	3.0
11 years	90.0	10.0	91.3	8.1	0.6	88.9	8.4	2.7
	Standard error							
Both sexes 6-11 years	1.63	1.63	0.45	0.44	0.09	0.47	0.43	0.24
Boys 6-11 years	1.83	1.83	0.44	0.44	0.12	0.56	0.49	0.30
Girls 6-11 years	1.46	1.46	0.65	0.66	0.11	0.71	0.67	0.39

Table 6. Percent of children of 6-11 years in 1963-65 born in a hospital showing length of mother's stay in hospital following delivery by length of child's stay in hospital, age of child at time of survey, and sex, with standard errors for totals: United States

Age and sex	Child born in a hospital								
	Mother's stay less than 1 week			Mother's stay 1-2 weeks			Mother's stay more than 2 weeks		
	Child's stay			Child's stay			Child's stay		
	Less than 1 week	1-2 weeks	More than 2 weeks	Less than 1 week	1-2 weeks	More than 2 weeks	Less than 1 week	1-2 weeks	More than 2 weeks
	Percent of children								
Both sexes									
6-11 years	95.9	1.6	2.5	4.5	90.6	4.9	6.6	14.5	78.9
6 years	95.9	1.3	2.8	4.3	92.9	2.8	-	74.4	25.6
7 years	95.8	1.7	2.5	4.7	90.9	4.4	-	20.9	79.1
8 years	95.8	1.9	2.3	7.2	85.6	7.2	-	20.8	79.2
9 years	95.6	2.1	2.3	4.7	92.9	2.4	10.3	-	89.7
10 years	96.3	1.1	2.6	5.5	87.7	6.8	-	-	100.0
11 years	96.7	1.2	2.1	1.1	93.5	5.4	19.1	-	80.9
Boys									
6-11 years	96.1	1.7	2.2	4.3	90.7	5.0	8.4	13.0	78.6
6 years	96.4	1.2	2.4	4.6	95.3	-	-	100.0	-
7 years	95.6	1.7	2.7	6.5	85.7	7.8	-	-	100.0
8 years	95.5	2.7	1.8	5.0	88.3	6.7	-	33.9	66.1
9 years	96.6	1.8	1.6	3.2	94.7	2.1	17.6	-	82.4
10 years	96.2	1.2	2.6	4.1	90.3	5.6	-	-	100.0
11 years	96.2	1.7	2.1	2.1	91.8	6.1	18.3	-	81.7
Girls									
6-11 years	95.9	1.4	2.7	4.8	90.4	4.8	4.4	16.2	79.4
6 years	95.4	1.3	3.3	3.9	90.4	5.7	-	58.5	41.5
7 years	96.1	1.6	2.3	2.4	97.6	-	-	32.9	67.1
8 years	96.0	1.1	2.9	10.5	81.7	7.8	-	-	100.0
9 years	94.6	2.3	3.1	6.8	90.2	3.0	-	-	100.0
10 years	96.3	1.1	2.6	7.2	84.7	8.1	-	-	100.0
11 years	97.3	0.7	2.0	-	95.4	4.6	20.0	-	80.0
	Standard error								
Both sexes 6-11 years	0.28	0.13	0.22	0.95	1.76	1.11	4.34	8.50	9.33
Boys 6-11 years	0.38	0.27	0.26	0.98	1.89	1.34	6.23	9.03	8.98
Girls 6-11 years	0.44	0.19	0.37	1.55	2.48	1.75	4.56	11.36	12.49

Table 7. Percent of children of 6-11 years in 1963-65 having health problems in infancy with and without medical care obtained and infant health status, by condition at birth, age of child at time of survey, and sex, with standard errors for totals: United States

Age and sex	Health problem in infancy	No health problem in infancy	Care for health problem in infancy		Infant health status								
					All children			Birth-defective children			Normal children		
			Doctor consulted	Doctor not consulted	Good	Fair	Poor	Good	Fair	Poor	Good	Fair	Poor
	Percent of children												
Both sexes													
6-11 years	14.5	85.5	98.2	1.8	90.8	7.6	1.6	73.1	19.7	7.2	92.4	6.5	1.1
6 years	12.5	87.5	100.0	-	93.6	5.9	0.5	84.4	15.6	-	94.4	5.1	0.5
7 years	14.4	85.6	98.2	1.8	91.3	7.1	1.6	73.4	20.0	6.6	92.9	6.0	1.1
8 years	13.2	86.8	98.3	1.7	90.4	7.9	1.7	75.5	17.2	7.3	91.8	7.0	1.2
9 years	15.0	84.0	97.4	2.6	90.9	7.0	2.1	70.8	17.0	12.2	92.7	6.1	1.2
10 years	16.9	83.1	97.6	2.4	89.0	8.4	2.6	63.1	27.2	9.7	91.8	6.3	1.9
11 years	14.4	85.6	98.1	1.9	89.1	9.4	1.5	72.4	20.4	7.2	90.5	8.5	1.0
Boys													
6-11 years	16.4	83.6	97.9	2.1	90.0	8.4	1.6	70.9	22.2	6.9	91.9	7.0	1.1
6 years	13.1	86.9	100.0	-	93.0	6.2	0.8	88.8	11.2	-	93.6	5.6	0.8
7 years	18.6	81.4	97.3	2.7	89.9	8.9	1.2	70.5	25.7	3.8	91.9	7.2	0.9
8 years	14.8	85.2	97.7	2.3	89.1	8.5	2.4	73.4	16.6	10.0	90.3	7.9	1.8
9 years	17.0	83.0	97.4	2.6	90.9	7.4	1.7	64.5	24.5	11.0	93.2	6.0	0.8
10 years	19.0	81.0	97.7	2.3	88.8	9.2	2.0	56.7	35.4	7.9	91.6	6.8	1.6
11 years	15.9	84.1	97.7	2.3	88.2	10.0	1.8	67.6	22.3	10.1	90.3	8.8	0.9
Girls													
6-11 years	12.6	87.4	98.7	1.3	91.5	6.8	1.7	75.7	16.7	7.6	92.9	5.9	1.2
6 years	11.8	88.2	100.0	-	94.2	5.6	0.2	78.0	22.0	-	95.3	4.5	0.2
7 years	10.0	90.0	100.0	-	92.8	5.2	2.0	78.0	10.9	11.1	93.9	4.8	1.3
8 years	11.5	88.5	99.0	1.0	91.8	7.2	2.0	78.3	18.0	3.7	93.2	6.1	0.7
9 years	15.0	85.0	97.5	2.5	90.9	6.6	2.5	77.2	9.5	13.3	92.2	6.2	1.6
10 years	14.7	85.3	97.6	2.4	89.3	7.5	3.2	68.0	21.0	11.0	91.9	5.8	2.3
11 years	12.8	87.2	98.6	1.4	90.0	8.8	1.2	79.0	17.8	3.2	90.7	8.2	1.1
	Standard error												
Both sexes 6-11 years	0.67	0.67	0.49	0.49	0.49	0.43	0.14	2.33	2.25	1.03	0.44	0.39	0.15
Boys 6-11 years	0.88	0.88	0.79	0.79	0.54	0.50	0.22	3.30	2.97	1.33	0.55	0.51	0.25
Girls 6-11 years	0.67	0.67	0.55	0.55	0.57	0.52	0.13	2.74	2.30	1.51	1.56	0.48	0.20

Table 8. Percent of children of 6-11 years in 1963-65 showing birth weight by infant health status, age at time of survey, and sex, with standard errors for totals: United States

Age and sex	Infant health status								
	Birth weight less than 5 pounds			Birth weight 5-10 pounds			Birth weight more than 10 pounds		
	Good	Fair	Poor	Good	Fair	Poor	Good	Fair	Poor
	Percent of children								
Both sexes									
6-11 years	78.0	16.5	5.5	91.3	7.2	1.5	88.1	10.2	1.7
6 years	86.7	13.3	-	93.8	5.7	0.5	100.0	-	-
7 years	66.3	33.7	-	92.2	6.2	1.6	79.9	20.1	-
8 years	82.7	11.6	5.7	90.6	7.8	1.6	94.1	5.9	-
9 years	87.6	4.7	7.7	90.9	7.1	2.0	100.0	-	-
10 years	69.1	18.7	12.2	89.7	8.2	2.1	89.8	-	10.2
11 years	67.5	21.8	10.7	90.0	8.8	1.2	75.6	24.4	-
Boys									
6-11 years	71.2	21.6	7.2	90.8	7.8	1.4	82.0	15.4	2.6
6 years	91.3	8.7	-	93.0	6.2	0.8	100.0	-	-
7 years	59.5	40.5	-	91.2	7.6	1.2	74.9	25.1	-
8 years	68.4	26.7	4.9	89.7	7.9	2.4	78.0	22.0	-
9 years	69.6	11.5	18.9	91.5	7.2	1.3	100.0	-	-
10 years	47.8	38.8	13.4	89.7	8.7	1.6	85.2	-	14.8
11 years	85.1	-	14.9	89.0	9.6	1.4	70.2	29.8	-
Girls									
6-11 years	83.3	12.5	4.2	91.8	6.6	1.6	100.0	-	-
6 years	82.9	17.1	-	94.7	5.1	0.2	100.0	-	-
7 years	75.3	24.7	-	93.2	4.8	2.0	100.0	-	-
8 years	93.6	-	6.4	91.6	7.6	0.8	100.0	-	-
9 years	100.0	-	-	90.5	6.9	2.6	100.0	-	-
10 years	80.0	8.4	11.6	89.8	7.6	2.6	100.0	-	-
11 years	54.4	38.1	7.5	91.0	7.9	1.1	100.0	-	-
	Standard error								
Both sexes 6-11 years	2.51	2.59	1.78	0.50	0.44	0.15	4.98	4.63	1.65
Boys 6-11 years	5.00	4.56	2.58	0.59	0.53	0.23	7.23	6.77	2.42
Girls 6-11 years	3.31	3.14	2.05	0.55	0.49	0.15	-	-	-

Table 9. Percent of children of 6-11 years in 1963-65 showing timing of birth by infant health status, age at time of survey, and sex, with standard errors for totals: United States

Age and sex	Infant health status								
	Early birth			Normal birth			Late birth		
	Good	Fair	Poor	Good	Fair	Poor	Good	Fair	Poor
	Percent of children								
Both sexes									
6-11 years	86.6	10.5	2.9	91.6	7.0	1.4	92.0	6.8	1.2
6 years	90.6	9.0	0.4	94.7	4.8	0.5	92.5	7.0	0.5
7 years	86.5	11.6	1.9	91.9	6.7	1.4	93.7	4.2	2.1
8 years	83.6	11.6	4.8	91.8	7.2	1.0	91.4	7.0	1.6
9 years	90.7	6.5	2.8	91.2	6.6	2.2	90.5	8.8	0.7
10 years	80.1	16.8	3.1	90.3	6.9	2.8	92.7	5.9	1.4
11 years	86.8	7.8	5.4	89.3	9.9	0.8	91.4	8.0	0.6
Boys									
6-11 years	85.3	11.7	3.0	91.0	7.7	1.3	90.9	7.4	1.7
6 years	90.8	8.3	0.9	93.9	5.4	0.7	91.7	7.3	1.0
7 years	84.9	14.1	1.0	90.4	8.8	0.8	92.7	4.2	3.1
8 years	82.6	11.8	5.6	89.8	8.7	1.5	92.8	4.1	3.1
9 years	88.4	8.2	3.4	91.8	6.6	1.6	89.5	10.5	-
10 years	74.2	24.1	1.7	91.6	6.3	2.1	91.7	5.8	2.5
11 years	88.8	4.8	6.4	88.4	10.7	0.9	86.3	13.7	-
Girls									
6-11 years	88.3	9.0	2.7	92.1	6.3	1.6	93.3	6.1	0.6
6 years	90.2	9.8	-	95.5	4.2	0.3	93.4	6.6	-
7 years	88.5	8.4	3.1	93.4	4.6	2.0	94.9	4.1	1.0
8 years	84.9	11.4	3.7	93.6	5.9	0.5	90.1	9.9	-
9 years	93.5	4.5	2.0	90.6	6.5	2.9	91.3	7.3	1.4
10 years	86.3	9.1	4.6	89.1	7.5	3.4	93.9	6.1	-
11 years	84.0	11.8	4.2	90.1	9.1	0.8	95.5	3.5	1.0
	Standard error								
Both sexes 6-11 years	1.18	0.95	0.64	0.54	0.49	0.19	1.23	1.10	0.39
Boys 6-11 years	1.55	1.31	0.71	0.61	0.54	0.23	1.53	1.47	0.63
Girls 6-11 years	1.24	1.01	0.78	0.63	0.59	0.23	1.31	1.26	0.35

Table 10. Percent of children of 6-11 years in 1963-65 breast fed, by length of breast feeding, acceptance of weaning, age of child at time of survey, and sex, with standard errors for totals: United States

Age and sex	Breast fed	Not breast fed	Length of breast feeding			Acceptance of weaning		
			Less than 1 month	1-6 months	Over 6 months	No problem	Some problem	Considerable problem
	Percent of children							
Both sexes								
6-11 years	33.9	66.1	25.2	49.0	25.8	90.6	7.8	1.6
6 years	31.5	68.5	21.8	57.0	21.2	91.4	7.5	1.1
7 years	32.5	67.5	21.3	51.4	27.3	91.2	7.6	1.2
8 years	32.3	67.7	26.6	50.3	23.1	92.0	5.9	2.1
9 years	34.0	66.0	26.9	46.7	26.4	88.9	9.6	1.5
10 years	37.0	63.0	27.6	47.5	24.9	90.9	7.5	1.6
11 years	36.7	63.3	26.6	42.0	31.4	89.3	8.8	1.9
Boys								
6-11 years	33.1	66.9	26.8	49.7	23.5	91.9	6.6	1.5
6 years	32.7	67.3	22.9	57.9	19.2	91.2	7.3	1.5
7 years	31.9	68.1	23.3	50.2	26.5	93.5	5.2	1.3
8 years	31.6	68.4	28.9	51.3	19.8	95.0	3.4	1.6
9 years	31.6	68.4	26.8	49.9	23.3	91.7	7.3	1.0
10 years	34.3	65.7	32.2	42.0	25.8	90.7	8.1	1.2
11 years	36.5	63.5	26.6	47.6	25.8	89.6	8.2	2.2
Girls								
6-11 years	34.8	65.2	23.6	48.3	28.1	89.3	9.0	1.7
6 years	30.2	69.8	20.7	55.8	23.5	91.7	7.8	0.5
7 years	33.1	66.9	19.3	52.7	28.0	88.9	10.0	1.1
8 years	33.1	66.9	24.3	49.3	26.4	88.9	8.4	2.7
9 years	36.6	63.4	27.0	43.8	29.2	86.3	11.7	2.0
10 years	39.7	60.3	23.5	52.4	24.1	91.1	6.9	2.0
11 years	36.8	63.2	26.7	36.2	37.1	89.2	9.3	1.5
	Standard error							
Both sexes 6-11 years	1.36	1.36	0.86	1.42	1.49	0.65	0.57	0.31
Boys 6-11 years	1.39	1.39	1.39	1.73	1.63	0.76	0.74	0.33
Girls 6-11 years	1.58	1.58	1.58	1.94	2.00	1.02	0.89	0.42

Table 11. Percent of children of 6-11 years in 1963-65 who were breast fed, by timing of birth, length of breast feeding, age at time of survey, and sex, with standard errors for totals: United States

Age and sex	Length of breast feeding								
	Early births			Normal births			Late births		
	Less than 1 month	1-6 months	More than 6 months	Less than 1 month	1-6 months	More than 6 months	Less than 1 month	1-6 months	More than 6 months
	Percent of children breast fed								
Both sexes									
6-11 years	35.3	49.5	15.2	21.9	48.2	29.9	31.5	52.5	16.0
6 years	32.2	57.4	10.4	19.9	55.0	25.1	19.9	65.7	14.4
7 years	33.4	46.9	19.7	17.9	49.8	32.3	25.4	64.6	10.0
8 years	36.9	50.4	12.7	22.4	51.2	26.4	39.2	45.6	15.2
9 years	30.9	54.2	14.9	26.2	44.5	29.3	26.5	49.0	24.5
10 years	48.2	36.6	15.2	21.1	48.5	30.4	39.3	52.2	8.5
11 years	31.1	50.7	18.2	23.6	40.9	35.5	37.3	38.3	24.4
Boys									
6-11 years	39.2	46.6	14.2	22.5	50.0	27.5	33.5	52.8	13.7
6 years	33.3	58.8	7.9	20.0	55.5	24.5	25.0	68.3	6.7
7 years	24.9	54.4	20.7	21.8	47.2	31.0	28.7	61.0	10.3
8 years	47.0	39.2	13.8	22.4	55.7	21.9	40.8	44.7	14.5
9 years	37.2	48.3	14.5	24.8	50.1	25.1	23.5	51.1	25.4
10 years	56.1	30.7	13.2	24.0	43.7	32.3	44.9	44.5	10.6
11 years	39.4	45.5	15.1	22.0	48.1	29.9	34.9	47.7	17.4
Girls									
6-11 years	30.7	52.8	16.5	21.3	46.6	32.1	29.4	52.2	18.4
6 years	30.9	55.8	13.3	19.8	54.5	25.7	13.8	62.6	23.6
7 years	43.7	37.8	18.5	14.2	52.2	33.6	21.6	68.8	9.6
8 years	24.5	64.0	11.5	22.4	47.2	30.4	37.1	46.7	16.2
9 years	23.0	61.6	15.4	27.4	39.8	32.8	28.9	47.3	23.8
10 years	40.3	42.4	17.3	18.6	52.6	28.8	33.2	60.6	6.2
11 years	19.8	57.9	22.3	25.2	33.5	41.2	39.4	30.2	30.4
	Standard error								
Both sexes 6-11 years	2.15	3.19	2.46	1.14	1.94	1.84	3.03	3.29	2.62
Boys 6-11 years	3.05	4.68	2.87	1.59	2.38	2.24	4.87	5.60	3.32
Girls 6-11 years	2.96	4.09	3.35	1.99	2.44	2.36	3.93	4.28	3.89

Table 12. Percent of children of 6-11 years in 1963-65 who were breast fed, by acceptance of weaning, age at time of survey, and sex, with standard errors for totals: United States

Age and sex	Acceptance of weaning								
	Breast fed less than 1 month			Breast fed 1-6 months			Breast fed more than 6 months		
	No problem	Some problem	Considerable problem	No problem	Some problem	Considerable problem	No problem	Some problem	Considerable problem
Both sexes	Percent of children breast fed								
6-11 years	91.0	6.9	2.1	92.9	5.7	1.4	85.8	12.6	1.6
6 years	94.9	3.9	1.2	92.8	6.2	1.0	83.4	15.5	1.1
7 years	93.0	4.4	2.6	92.5	6.5	1.0	88.0	11.5	0.5
8 years	93.3	4.8	1.9	93.8	4.0	2.2	87.7	10.0	2.3
9 years	86.7	8.0	5.3	93.1	6.5	0.4	82.8	17.2	-
10 years	91.9	7.3	0.8	93.9	4.3	1.8	83.6	14.2	2.2
11 years	87.7	11.6	0.7	91.0	7.1	1.9	88.4	8.6	3.0
Boys 6-11 years	91.6	6.6	1.8	94.5	4.1	1.4	86.4	12.1	1.5
Girls 6-11 years	90.4	7.2	2.4	91.2	7.4	1.4	85.3	13.1	1.6
	Standard error								
Both sexes 6-11 years	1.11	0.97	0.54	0.84	0.78	0.37	1.32	1.29	0.48
Boys 6-11 years	1.65	1.54	0.89	0.75	0.72	0.36	2.85	2.87	0.85
Girls 6-11 years	1.55	1.53	0.75	1.45	1.41	0.56	1.89	1.68	0.53

Table 13. Percent of children of 6-11 years in 1963-65 showing health status in infancy by present health status, age at time of survey, and sex, with standard errors for totals: United States

Age and sex	Present health															
	All children				Good health in infancy				Fair health in infancy				Poor health in infancy			
	Very good	Good	Fair	Poor	Very good	Good	Fair	Poor	Very good	Good	Fair	Poor	Very good	Good	Fair	Poor
	Percent of children															
Both sexes																
6-11 years---	51.8	42.9	4.9	0.4	54.4	42.1	3.2	0.3	27.4	50.7	20.8	1.0	22.2	48.5	23.4	5.9
6 years----------	51.8	43.1	4.8	0.3	53.6	42.4	3.8	0.2	28.3	53.1	16.6	2.0	11.0	73.5	15.5	-
7 years----------	50.9	44.1	4.6	0.4	53.5	43.1	3.1	0.3	28.6	49.1	21.3	1.0	10.8	70.9	18.3	-
8 years----------	54.9	40.3	4.4	0.4	58.0	39.1	2.5	0.4	26.1	53.3	20.6	-	34.3	30.2	31.5	4.0
9 years----------	50.2	43.6	5.6	0.6	52.0	43.5	4.1	0.4	29.7	49.1	18.4	2.8	28.9	40.3	25.4	5.4
10 years----------	50.7	43.7	5.2	0.4	54.1	42.4	3.2	0.3	26.5	52.5	21.0	-	21.3	47.8	22.0	8.9
11 years----------	51.7	42.8	5.0	0.5	55.2	42.0	2.6	0.2	26.0	48.1	25.0	0.9	16.2	49.4	21.6	12.8
Boys																
6-11 years---	51.6	43.2	4.8	0.4	54.3	42.4	3.0	0.3	28.3	50.2	20.2	1.3	22.4	49.8	24.6	3.2
6 years----------	50.4	45.5	3.5	0.6	52.4	44.5	2.7	0.4	21.2	60.1	14.9	3.8	13.8	66.8	19.4	-
7 years----------	50.5	44.0	5.2	0.3	52.7	43.4	3.7	0.2	35.2	41.7	21.5	1.6	13.4	86.6	-	-
8 years----------	54.9	39.6	5.1	0.4	57.9	38.9	3.0	0.2	28.2	51.2	20.6	-	32.3	29.4	32.8	5.5
9 years----------	50.1	43.8	5.6	0.5	52.0	43.6	3.9	0.5	30.3	55.3	12.8	1.6	40.0	6.7	53.3	-
10 years----------	52.5	42.6	4.5	0.4	56.6	40.4	2.5	0.5	23.8	54.1	22.1	-	17.2	75.2	7.6	-
11 years----------	51.2	43.8	4.7	0.3	54.6	43.5	1.9	-	28.9	43.5	26.0	1.6	6.8	59.0	23.6	10.6
Girls																
6-11 years---	51.8	42.7	5.1	0.4	54.4	41.8	3.5	0.3	26.3	51.4	21.6	0.7	22.0	47.1	22.2	8.7
6 years----------	53.3	40.7	6.0	-	54.6	40.3	5.1	-	36.7	44.7	18.6	-	-	100.0	-	-
7 years----------	51.4	44.2	4.0	0.4	54.3	42.8	2.5	0.4	17.1	61.9	21.0	-	9.3	61.2	29.5	-
8 years----------	54.9	41.0	3.7	0.4	58.1	39.4	2.0	0.5	23.4	55.9	20.7	-	39.8	32.1	28.1	-
9 years----------	50.2	43.5	5.6	0.7	52.1	43.4	4.3	0.2	28.9	41.6	25.2	4.3	21.1	64.1	5.6	9.2
10 years----------	48.9	44.8	5.8	0.5	51.7	44.5	3.8	-	29.7	50.6	19.7	-	24.0	29.6	31.6	14.8
11 years----------	52.4	41.8	5.2	0.6	55.8	40.5	3.3	0.4	22.7	53.5	23.8	-	30.3	34.9	18.6	16.2
	Standard error															
Both sexes 6-11 years--	1.15	0.97	0.31	0.07	1.22	1.03	0.25	0.10	2.73	3.46	2.21	0.42	4.06	3.57	5.34	3.15
Boys 6-11 years----	1.40	1.16	0.31	0.17	1.45	1.22	0.33	0.19	3.38	3.69	2.36	0.66	4.82	5.59	6.34	2.39
Girls 6-11 years---	1.13	1.03	0.43	0.08	1.13	1.05	0.32	0.06	3.83	4.42	2.97	0.49	7.31	7.49	6.38	4.35

Table 14. Percent of children of 6-11 years in 1963-65 showing extent of medical care prior to birth, condition at birth, and health in infancy by annual family income at time of survey: United States

Medical care and health status	Annual family income					
	Less than $3,000	$3,000-$4,999	$5,000-$6,999	$7,000-$9,999	$10,000-$14,999	$15,000 or more
	Percent of children					
Saw doctor during pregnancy	90.7	97.4	99.5	99.8	100.0	100.0
Total doctor visits during pregnancy:						
1-3	15.6	5.4	2.2	0.8	0.8	1.4
4 or more	84.4	94.6	97.8	99.2	99.2	98.6
Initial doctor visit in:						
First trimester	89.3	96.0	98.3	99.0	98.5	97.5
Second trimester	9.1	2.6	0.5	0.2	-	-
Third trimester	1.6	1.4	1.2	0.8	1.5	2.5
Pregnancy complications	14.1	12.5	12.9	12.4	12.6	16.9
Birth defect	6.8	6.3	7.5	7.9	10.0	10.9
Born in hospital	73.9	91.5	97.8	99.0	99.6	99.6
Length of mother's hospital stay:						
Less than 1 week	94.2	94.5	93.3	91.6	92.9	86.4
1-2 weeks	4.9	4.9	6.5	8.0	6.8	13.2
More than 2 weeks	0.9	0.6	0.2	0.4	0.2	0.4
Length of child's hospital stay:						
Less than 1 week	90.6	90.9	89.8	88.1	89.3	84.2
1-2 weeks	6.0	6.2	7.2	9.1	7.4	12.8
More than 2 weeks	3.4	2.9	3.0	2.8	3.3	3.0
Timing of birth:						
Early	11.4	11.0	17.4	19.5	23.3	25.4
1-3 weeks	67.5	66.8	73.4	78.9	84.4	81.8
4 weeks or more	32.5	33.2	26.6	21.1	15.6	18.2
Normal	81.9	78.2	66.8	63.6	60.3	56.4
Late	6.7	10.8	15.8	16.9	16.4	18.2
Birth weight:						
Less than 5 pounds	3.7	3.0	3.1	2.6	2.8	2.3
5-10 pounds	94.4	95.8	96.2	96.1	96.2	95.6
More than 10 pounds	1.9	1.2	0.7	1.3	1.0	2.1
Infant health problems	12.9	13.5	15.6	15.0	14.6	20.3
Doctor seen for infant health problems	94.4	98.0	99.7	98.6	99.1	100.0
Infant health status:						
Good	87.0	89.2	91.3	92.3	93.6	93.7
Fair	9.5	9.0	7.4	6.7	5.7	5.4
Poor	3.5	1.8	1.3	1.0	0.7	0.9
Breast feeding	43.7	36.1	28.1	30.5	31.0	35.7
Length of breast feeding:						
Less than 1 month	14.9	26.3	26.8	32.7	27.9	31.0
1-6 months	40.1	44.2	52.2	52.4	61.1	61.8
More than 6 months	45.0	29.5	21.0	14.9	11.0	7.2
Acceptance of weaning:						
No problem	87.0	91.0	91.3	91.4	93.7	95.3
Some problem	10.3	7.9	7.1	6.6	5.9	4.7
Considerable problem	2.7	1.0	1.6	1.9	0.4	-

Table 15. Percent of children of 6-11 years of age in 1963-65 showing extent of medical care prior to birth, condition at birth, and health in infancy by education of parent at time of survey: United States

Medical care and health status	Years of schooling completed by parent							
	Less than 5	5-7	8	9-11	12	13-15	16	17 or more
	Percent of children							
Saw doctor during pregnancy	81.8	94.6	98.5	98.1	99.5	99.5	100.0	100.0
Total doctor visits during pregnancy:								
1-3	23.3	12.8	6.2	3.6	1.4	2.0	1.1	1.1
4 or more	76.7	87.2	93.8	96.4	98.6	98.0	98.9	98.9
Initial doctor visit in:								
First trimester	34.2	38.9	53.6	54.5	68.7	71.7	80.9	75.5
Second trimester	53.4	53.0	41.5	41.4	29.7	27.7	18.2	22.2
Third trimester	12.4	8.1	4.9	4.1	1.6	0.6	0.9	2.3
Pregnancy complications	10.9	15.3	11.7	12.3	12.7	13.6	13.8	16.8
Birth defect	5.1	8.3	5.5	7.3	8.0	11.7	10.0	8.7
Born in hospital	57.9	80.5	93.2	94.5	98.3	99.2	99.5	99.4
Length of mother's hospital stay:								
Less than 1 week	93.0	95.6	93.9	93.8	92.6	91.7	91.2	90.4
1-2 weeks	5.4	4.0	5.6	5.6	6.9	8.3	8.5	9.3
More than 2 weeks	1.6	0.4	0.5	0.6	0.5	-	0.3	0.3
Length of child's hospital stay:								
Less than 1 week	90.0	89.9	91.5	90.0	89.2	87.9	88.7	88.3
1-2 weeks	5.2	6.3	6.1	6.6	7.5	10.3	9.5	9.3
More than 2 weeks	4.8	3.8	2.4	3.4	3.3	1.8	1.8	2.4
Timing of birth:								
Early	7.0	10.3	12.5	14.4	19.0	22.2	23.2	20.9
1-3 weeks	63.1	65.5	73.2	67.8	78.0	78.8	82.4	87.0
4 weeks or more	36.9	34.5	26.8	32.2	22.0	21.2	17.6	13.0
Normal	91.3	82.5	75.3	73.0	64.3	58.9	59.5	62.7
Late	1.7	7.2	12.2	12.6	16.7	18.9	17.3	16.4
Birth weight:								
Less than 5 pounds	3.2	3.4	2.1	4.0	2.9	3.0	2.3	1.2
5-10 pounds	94.6	94.9	96.8	95.2	95.9	95.7	96.3	97.8
More than 10 pounds	2.2	1.7	1.1	0.8	1.2	1.3	1.4	1.0
Infant health problems	10.9	14.1	14.2	14.1	14.6	16.0	16.6	18.2
Doctor seen for infant health problems	87.8	99.1	98.2	98.3	99.0	99.1	99.1	98.4
Infant health status:								
Good	84.7	85.5	87.3	91.0	92.7	92.2	95.2	94.9
Fair	10.9	11.7	10.7	7.3	6.1	7.0	4.2	4.7
Poor	4.4	2.8	2.0	1.7	1.2	0.8	0.6	0.4
Breast feeding	47.2	43.2	27.4	26.4	31.7	33.2	39.6	43.2
Length of breast feeding:								
Less than 1 month	12.0	15.6	15.6	26.8	30.3	29.4	32.9	36.1
1-6 months	33.0	40.5	50.6	49.4	50.7	56.8	55.5	57.3
More than 6 months	55.0	43.9	33.8	23.8	19.0	13.8	11.6	6.6
Acceptance of weaning:								
No problem	90.5	86.9	90.3	87.4	92.3	90.2	94.5	91.2
Some problem	8.8	11.8	8.5	9.3	6.0	8.8	5.1	6.5
Considerable problem	0.6	1.2	2.2	3.4	1.7	1.0	0.4	2.2

Table 16. Percent of children of 6-11 years in 1963-65 showing extent of medical care prior to birth, condition at birth, and health in infancy for white and Negro children, rural residents, and by region: United States

Medical care and health status	Race		Region				Rural residents
	White	Negro	Northeast	Midwest	South	West	
	Percent of children						
Saw doctor during pregnancy	97.7	96.0	99.3	99.7	94.6	95.9	96.1
Total doctor visits during pregnancy:							
1-3	4.2	7.4	2.6	2.5	9.5	4.7	7.4
4 or more	95.8	92.6	97.4	97.5	90.5	95.3	92.6
Initial doctor visit in:							
First trimester	63.5	44.7	62.8	61.8	53.6	64.6	58.0
Second trimester	33.3	49.5	34.6	36.3	39.6	31.8	36.9
Third trimester	3.2	5.8	2.6	1.9	6.8	3.6	5.1
Pregnancy complications	12.9	13.7	12.3	9.8	11.7	11.1	14.1
Birth defect	8.2	6.0	8.7	9.0	7.4	6.2	7.7
Born in hospital	94.4	79.0	97.6	97.7	81.7	91.6	87.8
Length of mother's hospital stay:							
Less than 1 week	92.9	93.1	90.3	93.6	94.3	93.6	93.7
1-2 weeks	6.6	6.2	9.4	5.9	5.2	5.8	5.8
More than 2 weeks	0.5	0.7	0.3	0.5	0.5	0.6	0.5
Length of child's hospital stay:							
Less than 1 week	89.8	87.5	86.3	90.7	89.7	91.1	91.0
1-2 weeks	7.4	8.0	9.9	6.8	7.1	6.1	6.4
More than 2 weeks	2.8	4.5	3.8	2.5	3.2	2.8	2.6
Timing of birth:							
Early	17.3	10.5	18.0	17.9	11.8	17.3	15.4
1-3 weeks	77.1	62.0	74.4	81.4	69.1	75.0	77.3
4 weeks or more	22.9	38.0	25.6	18.6	30.9	25.0	22.7
Normal	67.5	85.7	66.8	66.1	79.0	69.3	71.7
Late	15.2	3.8	15.2	16.0	9.2	13.4	12.9
Birth weight:							
Less than 5 pounds	2.6	5.4	3.3	2.2	3.6	2.9	2.4
5-10 pounds	96.2	93.1	96.0	96.5	94.4	96.1	95.7
More than 10 pounds	1.2	1.5	0.7	1.3	2.0	1.0	1.9
Infant health problems	15.0	11.9	14.6	15.5	14.0	13.9	15.1
Doctor seen for infant health problems	98.5	96.0	97.8	98.9	97.8	98.1	97.1
Infant health status:							
Good	90.9	90.1	92.4	91.5	88.0	91.2	88.9
Fair	7.5	7.6	6.4	7.1	9.8	7.0	9.0
Poor	1.6	2.3	1.2	1.4	2.2	1.8	2.1
Breast feeding	32.4	43.3	20.3	31.6	42.2	40.9	38.3
Length of breast feeding:							
Less than 1 month	27.6	13.9	29.4	32.0	18.2	24.0	23.9
1-6 months	48.8	50.6	54.9	50.5	41.4	52.6	45.1
More than 6 months	23.6	35.5	15.7	17.5	40.4	23.4	31.0
Acceptance of weaning:							
No problem	91.5	86.7	90.5	92.8	87.8	91.3	90.1
Some problem	7.1	11.1	8.0	5.6	9.9	7.8	8.3
Considerable problem	1.4	2.2	1.6	1.7	2.2	0.8	1.6

APPENDIX I

STATISTICAL NOTES

The Survey Design

The sample design for the second cycle of the Health Examination Survey, similar to the one used for the first cycle, was that of a multistage, stratified probability sample of loose clusters of persons in land-based segments. Successive elements dealt with in the process of sampling are primary sampling unit (PSU), census enumeration district (ED), segment, household, eligible child (EC), and, finally, the sample child (SC).

At the first stage, the nearly 2,000 PSU's into which the United States (including Hawaii and Alaska) has been divided and then grouped into 357 strata for use in the Current Population Survey and the Health Interview Survey were further grouped into 40 superstrata for use in Cycle II of the Health Examination Survey. The average size of each Cycle II stratum was 4.5 million persons, and all strata fell between the limits of 3.5 and 5.5 million. Grouping into 40 strata was done in a way that maximized homogeneity of the PSU's included in each stratum, particularly with regard to degree of urbanization, geographic proximity, and degree of industrialization. The 40 strata were classified into four broad geographic regions (each with 10 strata) of approximately equal population and cross-classified into four broad population density groups (each having 10 strata). Each of the 16 cells contained either two or three strata. A single stratum might include only one PSU, only part of a PSU (e.g., New York City, which represented two strata), or several score PSU's.

To take account of the possible effect that the rate of population change between the 1950 and 1960 Census might have had on health, the 10 strata within each region were further classified into four classes ranging from those with no increase to those with the greatest relative increase. Each such class contained either two or three strata.

One PSU was then selected from each of the 40 strata. A controlled selection technique was used in which the probability of selection of a particular PSU was proportional to its 1960 population. In the controlled selection an attempt was also made to maximize the spread of the PSU's among the States. While not every one of the 64 cells in the 4x4x4 grid contributes a PSU to the sample of 40 PSU's, the controlled selection technique ensured the sample's matching the marginal distributions in all three dimensions and being closely representative of all cross-classifications.

Generally, within a particular PSU, 20 ED's were selected with the probability of selection of a particular ED proportional to its population in the age group 5-9 years in the 1960 Census, which by 1963 roughly approximated the population in the target age group for Cycle II. A similar method was used for selecting one segment (cluster of households) in each ED. Each of the resultant 20 segments was either a bounded area or a cluster of households (or addresses). All the children in the age range properly resident at the address visited were EC's. Operational considerations made it necessary to reduce the number of prospective examinees at any one location to a maximum of 200. The EC's to be excluded for this reason from the SC group were determined by systematic subsampling.

The total sample included 7,417 children from 25 different States in the age group 6-11 years with approximately 1,000 in each of the single years of age.

Reliability

Measurement processes employed in the survey were highly standardized and closely controlled. Of course this does not mean that the correspondence between the real world and the survey results is exact. Data from the survey are imperfect for three major reasons: (1) results are subject to sampling error, (2) the actual conduct of a survey never agrees perfectly with the design, and (3) the measurement processes themselves are inexact even though standardized and controlled.

The first report on Cycle II[4] describes in detail the faithfulness with which the sampling design was carried out. It notes that out of the 7,417 sample children, the 7,119 who were examined—a response rate of 96 percent—gave evidence that they were a highly representative sample of children of this age in the noninstitutional population of the United States. The

response levels for the various demographic subgroups—including those for age, sex, race, region, population density, parent's educational level, and family income—show no marked differentials. Hence it appears unlikely that nonresponse could bias the findings much in these respects.

Measures used to control the quality of data from this survey in general have been cited previously; [4] those relating specifically to the prenatal and postnatal health needs and medical care of children are outlined in an earlier section of this report.

Data recorded for each sample child are inflated in the estimation process to characterize the larger universe of which the sample child is representative. The weights used in this inflation process are a product of the reciprocal of the probability of selecting the child, an adjustment for nonresponse cases, and a poststratified ratio adjustment which increases precision by bringing survey results into closer alignment with known U.S. population figures by color and sex within single years of age 6-11.

In the second cycle of the Health Examination Survey the sample was the result of three stages of selection—the single PSU from each stratum, the 20 segments from each sample PSU, and the sample children from the eligible children. The probability of selecting an individual child is the product of the probability of selection at each stage.

Since the strata are roughly equal in population size and a nearly equal number of sample children were examined in each of the sample PSU's, the sample design is essentially self-weighting with respect to the

Table I. Number of examined children for whom specified medical history questions were not answered, by age at time of survey: Health Examination Survey, 1963-65

History question	Age in years											
	"Don't know" answer						Question not answered					
	6	7	8	9	10	11	6	7	8	9	10	11
	Number of examinees											
5. Was this child born in a hospital?	3	1	5	1	7	7	3	0	2	2	1	0
5A. About how long did you (the mother) stay in the hospital after the baby was born?	11	4	15	9	16	15	76	80	86	87	84	117
5C. About how long did the baby stay in the hospital?	6	4	13	6	14	16	79	86	90	93	89	121
6. About how many pounds did the baby weigh at birth?	10	7	12	10	19	18	2	5	1	3	3	2
7A. Was the baby born about when expected, or earlier or later?	11	11	14	11	19	15	4	4	7	3	6	6
8. Was there anything unusual or was anything wrong with the baby when born?	8	8	18	9	9	10	8	4	5	3	7	6
9. While you (the mother) were pregnant with this child did you have any medical problems or complications?	18	16	29	16	25	21	5	6	6	4	8	2
11. Before this baby was born, while you (the mother) were pregnant with this child, did you see a doctor?	15	10	18	12	18	19	2	2	1	4	7	2
11A. About how many months pregnant were you when you first saw a doctor?	12	14	17	12	16	23	43	47	47	54	48	60
11B. About how many times altogether did you see a doctor while you were pregnant?	40	38	41	40	38	49	64	73	79	80	64	90
12. Did you have any trouble with the pregnancy or birth of this child?	18	12	27	14	24	27	5	7	5	4	10	3
13. When he (or she) was a baby, that is before he was a year old, would you say that he was in good health, in fair or poor health?	3	3	7	7	7	5	7	3	12	2	10	5
14. Was there anything wrong with him (her) when a baby?	3	4	9	9	10	4	2	3	8	5	11	6
15. Was the child breast fed?	6	5	11	7	9	11	1	5	3	2	4	2

target population; that is, each child 6-11 years old had about the same probability of being drawn into the sample.

The adjustment upward for nonresponse is intended to minimize the impact of nonresponse on final estimates by imputing to nonrespondents the characteristics of "similar" respondents. Here "similar" respondents were judged to be examined children in a sample PSU having the same age (in years) and sex as children not examined in that sample PSU.

The poststratified ratio adjustment used in the second cycle achieved most of the gains in precision which would have been attained if the sample had been drawn from a population stratified by age, color, and sex and made the final sample estimates of population agree exactly with independent controls prepared by the Bureau of the Census for the noninstitutional population of the United States as of August 1, 1964 (approximate midsurvey point), by color and sex for each single year of age 6-11. The weight of every responding sample child in each of the 24 age, color, and sex classes is adjusted upward or downward so that the weighted total within the class equals the independent population control.

In addition to children not examined at all, there were some whose examination was incomplete in one procedure or another. The extent of missing data for the questions used in this report is shown in table I.

Missing data are categorized here as unanswered questions and "don't know" responses. The four questions with the highest level of nonresponse are: 11B, total doctor visits during pregnancy (9.8 percent nonresponse); 5C, length of baby's hospital stay (8.7 percent); 5A, length of mother's hospital stay (8.4 percent); and 11A, time of mother's initial visit to a doctor during pregnancy (5.5 percent). Nonresponse amounted to approximately 1 percent for each of the remaining questions.

Only question 11A indicated a trend for "don't know" responses by age of the child. Twice the number of "don't know" responses recorded for 6-year-olds were recorded for 11-year-olds. On several questions the number of blank responses was nearly the same for 6- through 10-year-olds but increased considerably for the 11-year-old group.

Validation of the history responses on birth weight was possible by matching each child's medical history with his birth certificate. Birth certificates were available for 6,720 of the 7,119 examined children. Of these, 5,950 certificates contained birth weight data, which were matched with the medical history item. There was a high degree of correspondence between the paired documents; only 115 (1.9 percent) of the birth weights recorded on the birth certificates did not fall within the range indicated by the parent on the health history questionnaire (table II). Sixty-five percent of these discrepancies were parent's underestimates of the child's actual birth weight, and the remainder were overestimates. There were no differences between boys and girls in the direction or magnitude of error. Birth weight was underestimated for 36 boys and 39 girls; it was overestimated for 19 boys and 21 girls. No consistent trend by age is evident here.

Table II. Number of examined children whose birth weight on the medical history differed from that on birth certificate or was not given, by age at time of survey and sex: Health Examination Survey, 1963-65

Age and sex	Birth weight on history			
	Lower than on birth certificate	Higher than on birth certificate	"Don't know" answer	Question not answered
	Number of children			
Both sexes 6-11 years	75	40	35	12
Boys				
6 years	5	2	3	2
7 years	2	0	1	2
8 years	7	4	4	0
9 years	7	4	1	1
10 years	8	6	2	0
11 years	7	3	3	0
Girls				
6 years	10	3	3	0
7 years	4	4	3	3
8 years	7	6	4	0
9 years	2	4	2	2
10 years	9	3	6	1
11 years	7	1	3	1

Birth weight data from the birth certificate were used in this report for the 47 children whose mother could not or did not answer this question in the medical history at the time of this survey.

Sampling and Measurement Error

In the present report, reference has been made to efforts to minimize bias and variability of measurement techniques.

The probability design of the survey makes possible the calculation of sampling errors. The sampling error is used here to determine how imprecise the survey test results may be because they come from a sample rather than from the measurements of all elements in the universe.

The estimation of sampling errors for a study of the type of the Health Examination Survey is difficult for at least three reasons: (1) measurement error and "pure" sampling error are confounded in the data—it is not easy to find a procedure which will either com-

pletely include both or treat one or the other separately, (2) the survey design and estimation procedure are complex and accordingly require computationally involved techniques for the calculation of variances, and (3) from the survey are coming thousands of statistics, many for subclasses of the population for which there are a small number of cases. Estimates of sampling error are obtained from the sample data and are themselves subject to sampling error, which may be large when the number of cases in a cell is small or even occasionally when the number of cases is substantial.

Estimates of approximate sampling variability for selected statistics used in this report are presented in the detailed tables. These estimates have been prepared by a replication technique which yields overall variability through observation of variability among random subsamples of the total sample as previously described.[11] The method reflects both "pure" sampling variance and a part of the measurement variance.

In accordance with usual practice, the interval estimate for any statistic may be considered the range within one standard error of the tabulated statistic with 68-percent confidence, or the range within two standard errors of the tabulated statistic with 95-percent confidence. The latter is used as the level of significance in this report.

An approximation of the standard error of a difference $d = x - y$ of two statistics x and y is given by the formula $S_d = \left(S_x^2 + S_y^2\right)^{1/2}$ where S_x and S_y are the sampling errors, respectively, of x and y .

Small Categories

In some tables magnitudes are shown for cells for which the sample size is so small that the sampling error may be several times as great as the statistic itself. Obviously in such instances the statistic has no meaning in itself except to indicate that the true quantity is small. Such numbers, if shown, have been included in the belief that they may help to convey an impression of the overall story of the table.

APPENDIX II

DEMOGRAPHIC AND SOCIOECONOMIC VARIABLES AND RELATED TERMS

Age.—The age recorded for each child was the age at last birthday on the date of examination. The age criterion for inclusion in the sample used in this survey was defined in terms of age at time of interview. Since the examination usually took place 2 to 4 weeks after the interview, some of those who were 11 years old at the time of interview became 12 years old by the time of examination. There were 72 such cases. In the adjustment and weighting procedures used to produce national estimates, these 72 were included in the 11-year-old group.

Race.—Race was recorded as "white," "Negro," or "other races." The last category included American Indians, Chinese, Japanese, and all races other than white or Negro. Mexican persons were included with "white" unless definitely known to be American Indian or of another race. Negroes and persons of mixed Negro and other parentage were recorded as "Negro."

Geographic region.—For purposes of stratification the United States was divided into four broad geographic regions of approximately equal population. These regions, which correspond closely to those used by the U.S. Bureau of the Census, were as follows:

Region	*States Included*
Northeast	Maine, Vermont, New Hampshire, Massachusetts, Connecticut, Rhode Island, New York, New Jersey, and Pennsylvania
Midwest	Ohio, Illinois, Indiana, Michigan, Wisconsin, Minnesota, Iowa, and Missouri
South	Delaware, Maryland, District of Columbia, West Virginia, Virginia, Kentucky, Tennessee, North Carolina, South Carolina, Georgia, Florida, Alabama, Mississippi, Louisiana, and Arkansas
West	Washington, Oregon, California, Nevada, New Mexico, Arizona, Texas, Oklahoma, Kansas, Nebraska, North Dakota, South Dakota, Idaho, Utah, Colorado, Montana, Wyoming, Alaska, and Hawaii

Urban and rural areas.—The definition of urban and rural areas was the same as that used in the 1960 Census. According to this definition, the urban population was comprised of all persons living in (a) places of 2,500 inhabitants or more incorporated as cities, boroughs, villages, and towns (except towns in New England, New York, and Wisconsin); (b) the densely settled urban fringe, whether incorporated or unincorporated, of urbanized areas; (c) towns in New England and townships in New Jersey and Pennsylvania which contained no incorporated municipalities as subdivisions and had either 2,500 inhabitants or more, or a population of 2,500 to 25,000 and a density of 1,500 persons or more per square mile; (d) counties in States other than the New England States, New Jersey, and Pennsylvania that had no incorporated municipalities within their boundaries and had a density of 1,500 persons or more per square mile; and (e) unincorporated places of 2,500 inhabitants or more not included in any urban fringe. The remaining population was classified as rural.

Urban areas are further classified by population size for places within urbanized areas and other urban places outside urbanized areas.

Education of parent or guardian.—The highest grade completed in school was recorded. The only grades counted were those attended in a regular public or private graded school where persons were given formal education, whether during the day or at night and whether attendance was full or part time. A "regular" school is one which advances a person toward an

elementary or high school diploma, or a college, university, or professional school degree. Education in vocational, trade, or business schools outside the regular school system was not counted in determining the highest grade of school completed.

Family income.—The income recorded was the total income received during the past 12 months by the head of the household and all other household members related to the head by blood, marriage, or adoption. This income was the gross cash income (excluding pay in kind) except in the case of a family with its own farm or business, in which case net income was recorded.

Parent.—A parent was the natural parent or, in the case of adoption, the legal parent of the child.

Guardian.—A guardian was responsible for the care and supervision of the child. He (or she) did not have to be the legal guardian to be considered the guardian for this survey. A guardianship could only exist when the parent(s) of the child did not reside within the sample household.

Head of household.—Only one person in each household was designated as the "head." He (or she) was the person who was regarded as the head by the members of the household. In most cases the head was the chief breadwinner of the family although this was not always true. In some cases the head was the parent of the chief earner or the only adult member of the household.

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APPENDIX III. MEDICAL HISTORY

CONFIDENTIAL – *The National Health Survey is authorized by Public Law 652 of the 84th Congress (70 Stat. 489). All information which would permit identification of the individual will be held strictly confidential, will be used only by persons engaged in and for the purposes of the survey and will not be disclosed or released to others for any other purposes (22 FR 1687).*

FORM APPROVED
BUDGET BUREAU NO. 68-R620-54.6

DEPARTMENT OF
HEALTH, EDUCATION, AND WELFARE
PUBLIC HEALTH SERVICE
NATIONAL HEALTH SURVEY

HES-256

(1-5) _____

CHILD'S MEDICAL HISTORY - Parent

NAME OF CHILD *(Last, First, Middle)* (6-11)	SEGMENT	SERIAL	COL. NO.

NOTE: Please complete this form by checking the correct boxes and/or filling in the blanks where applicable. When you have completed it, keep it until the representative of the Health Examination Survey calls on you within a few days. If there are some questions you do not understand, please complete the others and the person who comes for the form will help you with the ones that were unclear.

(12-14) 1. SEX 1 ☐ Male 2 ☐ Female | 2. AGE | 3. DATE OF BIRTH *(Month, Day, Year)*

(15) 4. PLACE OF BIRTH *(City or Town, State)* | 5. WAS THIS CHILD BORN IN A HOSPITAL? 1 ☐ Yes 2 ☐ No 3 ☐ Don't know

IF YES: (Question 5)

A. About how long did you (the mother) stay in the hospital after the baby was born?
1 ☐ 1 week or less 2 ☐ 1 to 2 weeks 3 ☐ Over 2 weeks 4 ☐ Don't know

B. If mother stayed <u>over</u> 1 week, what was the reason for staying that long?

_____

_____

C. About how long did the baby stay in the hospital?

(17) 1 ☐ 1 week or less 2 ☐ 1-2 weeks 3 ☐ Over 2 weeks 4 ☐ Don't know

D. If the baby stayed <u>over</u> 1 week, what was the reason for staying that long?

_____

6. ABOUT HOW MANY POUNDS DID THE BABY WEIGH AT BIRTH?

(18) 1 ☐ Under 5 2 ☐ 5-10 3 ☐ Over 10 4 ☐ Don't know

7. WAS THE BABY BORN ABOUT WHEN HE(SHE) WAS EXPECTED, OR EARLIER, OR LATER?

1 ☐ Earlier than expected 2 ☐ When expected 3 ☐ Later 4 ☐ Don't know

If the baby was born <u>earlier</u> than expected, about how early?

1 ☐ Less than 4 weeks early 2 ☐ 4 or more weeks early 3 ☐ Don't know

8. WAS THERE ANYTHING UNUSUAL OR WAS ANYTHING WRONG WITH THE BABY WHEN HE(SHE) WAS BORN?

(21) 1 ☐ Yes 2 ☐ No 3 ☐ Don't know

IF YES:

A. What was the matter?

_____

_____

B. What did the doctor say caused this?

_____

_____

9. WHILE YOU (THE MOTHER) WERE PREGNANT WITH THIS CHILD DID YOU HAVE ANY MEDICAL PROBLEMS OR COMPLICATIONS?

(22) 1 ☐ Yes 2 ☐ No 3 ☐ Don't know

IF YES, what kind of trouble did you have? _____

_____

10. HOW MANY TIMES HAD YOU (THE MOTHER) BEEN PREGNANT BEFORE, INCLUDING PREVIOUS MISCARRIAGES AS WELL AS DELIVERIES? (23) _____

11. BEFORE THIS BABY WAS BORN, WHILE YOU (THE MOTHER) WERE PREGNANT WITH THIS CHILD, DID YOU (THE MOTHER) SEE A DOCTOR?

1 ☐ Yes 2 ☐ No 3 ☐ Don't know

IF YES:

A. About how many months pregnant were you when you first saw a doctor?

1 ☐ Less than 3 2 ☐ 3 to 6 3 ☐ Over 6 4 ☐ Don't know

B. About how many times altogether did you see a doctor while you (the mother) were pregnant?

1 ☐ None 2 ☐ 1 to 3 3 ☐ 4 or more 4 ☐ Don't know

12. DID YOU (THE MOTHER) HAVE ANY TROUBLE WITH THE PREGNANCY OR BIRTH OF THIS CHILD?

(27) 1 ☐ Yes 2 ☐ No 3 ☐ Don't know

IF YES, what was the trouble? _____

_____

13. WHEN HE(SHE) WAS A BABY, THAT IS BEFORE HE WAS A YEAR OLD, WOULD YOU SAY HE WAS IN GOOD HEALTH, IN FAIR OR POOR HEALTH?

1 ☐ Good health 2 ☐ Fair health 3 ☐ Poor health 4 ☐ Don't know

14. WAS THERE ANYTHING WRONG WITH HIM(HER) WHEN HE(SHE) WAS A BABY?

1 ☐ Yes 2 ☐ No 3 ☐ Don't know

A. If the baby was not in good health or had anything wrong, what was the trouble? _____

_____

_____

B. Did you see a doctor about it?

(30) 1 ☐ Yes 2 ☐ No 3 ☐ Don't know

C. IF YES, did he say what caused the trouble? _____

_____

15. WAS THE CHILD BREAST FED?

(31) 1 ☐ Yes 2 ☐ No 3 ☐ Don't know

A. IF YES, for about how many months was he(she) breast fed?

1 ☐ Less than 1 2 ☐ 1 to 6 3 ☐ Over 6 4 ☐ Don't know

B. When breast feeding was stopped, how easily did the baby accept the change?

1 ☐ No problem 2 ☐ Some problem 3 ☐ Considerable problem

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